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THE LATIMER COLLECTION OF ANTIQUITIES

FROM

PORTO RICO IN THE NATIONAL MUSEUM

AND

THE GUESDE COLLECTION OF ANTIQUITIES

IN


POINTE-A-PITRE, GUADELOUPE, WEST INDIES.

BY

OTIS T. MASON.

[FROM THE SMITHSONIAN REPORTS FOR 1876 AND 1884.]

WASHINGTON:
PUBLISHED BY THE SMITHSONIAN INSTITUTION.
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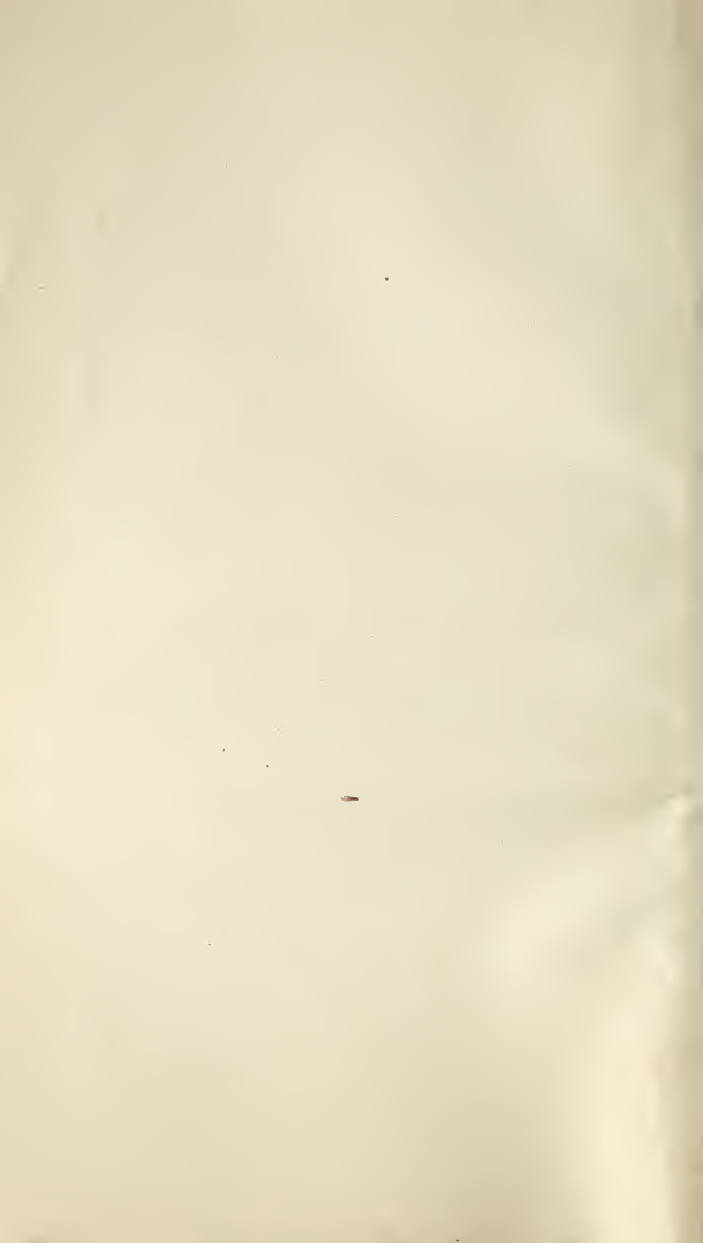
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PREFACE.

Since the two papers here reproduced were written considerable literature has accumulated with reference to the archæology of the Greater and the Lesser Antilles and contiguous areas in Central America, South America, and the United States.

While there are types of ornamentation and manufactures common throughout the regions mentioned, it is quite definitely settled that certain peculiar forms of stone implements, called Carib in the Guesde collection, reached no further north than Guadeloupe and the adjacent smaller islands, and new types of carvings in stone and wood appear in Porto Rico and the Bahamas. Indeed, no discovery has been made in the last twenty-five years, which goes to show that some of these peculiar types were not restricted to Porto Rico itself.

Since the acquisition of the Latimer collection by the Smithsonian Institution, however, other collections have been made in Porto Rico, so that the number of collars known amounts to one hundred, while the number of Zemes has been also greatly increased. Mention should be made in this place of Professor William H. Holmes' studies in pottery ornamentation, through which he finds traces of Caribbean influence in the meandering designs figured in the Latimer pamphlet in South Carolina and Florida. He says: "The ceramic products bearing evidence of Caribbean influence in Florida belong to the latest pre-Columbian times—the Timuquanan-Muskogean period—while the earlier pottery, represented in what appears to be a middle period of shell-heap deposition, affiliates with phases of the art prevalent in the Gulf States beyond the limits of supposed Carib influence.

"Taken altogether, the ceramic phenomena of the Southern States seem to indicate pretty much the degree of intercourse between the nations occupying the neighboring land areas as would be expected of enterprising peoples well enough advanced in maritime matters to navigate the wide straits with considerable ease, yet decidedly attached through long occupation to definite traditional seats of habitation; the tendency being under such conditions of association for culture elements to pass by infiltration, so to speak, from the higher to the lower culture groups."

In this same connection attention is called to the discovery of the blow-tube in North Carolina and Louisiana, and the custom of the Indians in the latter of weaving bandages above the calf of the leg and on the upper part of the arm.

The most significant archæological investigations, however, in this connection were those of Mr. Frank Hamilton Cushing at San Marco, in southwestern Florida, and the explorations of Mr. Clarence Moore in the sand mounds of Florida. The latter author has clearly revealed a culture not akin to that of the Indians found upon the spot when this region was first visited by Ponce de Leon, but Mr. Cushing's explorations in the old canals and artificial lagoons reveal a wealth of archæological treasures, all of which ally the ancient people of southern Florida to those of the Antilles and of Middle and South America.

I would call attention also to a paper by Dr. J. Walter Fewkes on the "Zemes of Porto Rico," in which he clearly traces the connection of the mami-stones with the object of worship mentioned by the early historians of Columbus. "It would seem, from the various historical accounts of the Zemes, that they had in the Carib mind somewhat the same significance as the fetishes in the conceptions of the inhabitants of the continent of America. The same word is used for both images and 'spirits.' They alike had powers of good or evil, and Boitii or sorcerers held conversations with both, being aided in various ways by these idols in imparting assistance to others. The spirits and the image seem to be associated.

"I have throughout this article considered them as the productions of the Caribs, but am not sure that another people may not have had a hand in their manufacture. That they belonged to an aboriginal American race seems evident, and I believe that race was the Carib, but demonstration of the fact is beyond my present powers."

The Guesde collection is more easily identified with Carib work, as one may see by comparing them with figures in works treating of the maintained Caribs of South America.

The following publications contain matter germane to the study of West Indian antiquities:

- BLAKE (EDITH). The Norbrook Kitchen Midden. Victoria Quarterly, Kingston, Jamaica, 1890, vol. 2, pp. 26-33.
- BRINTON (DANIEL G.) The Archæology of Cuba. Am. Archæologist, Columbus, Ohio, 1898, vol. 2, No. 10, 4 pp.
- DUERDEN (J. E.) Aboriginal Indian Remains in Jamaica. Journal of the Institute of Jamaica, Kingston, 1897, vol. II, No. 4, 52 pp. Map and bibliography.
- FEWKES (J. WALTER). On Zemes from Santo Domingo. Am. Anthropologist, Washington, 1891, pp. 167-175, 7 figs.
- HOLMES (WILLIAM H.) Caribbean Influence on the Prehistoric Ceramic Art of the Southern States. Am. Anthropologist, Washington, 1894, pp. 71-79, 6 figs.
- MOORE (CLARENCE B.) Certain Aboriginal Mounds of the Georgia Coast, inclosing Inhumation and Incineration in Europe by the Marquis De Nadaillac.
- MOORE (CLARENCE B.) Certain Sand Mounds of Duvall County, Florida, inclosing Two Mounds on Murphy Island, Florida, and Certain Sand Mounds of the Ocklawaha River, Florida.
- MOORE (CLARENCE B.) Certain Sand Mounds of the St. Johns River, Florida, parts 1 and 2, inclosing Earthenware of Florida by William H. Holmes.
- OBER (F. A.) Aborigines of the West Indies. Proc. Am. Antiquarian Soc., Worcester, Mass., 1894, pp. 1-46.
- OBER (F. A.) Puerto Rico and Its Resources. New York, 1899, D. Appleton & Co.
- TEN KATE (H. F. C., JUN.) On West Indian Stone Implements and Other Indian Relics. Bijdragen tot de Taal, Land en Volkenkunde van Nederlandsch-Indië 5 Volgr., IV.
- THURN (E. F., IM.) On the Races of the West Indies. Jour. of the Anthropological Institute, Lond., Nov., 1886, pp. 190-196.
- THURN (E. F., IM.) West Indian Stone Implements. Timehri, Demerara, 1882-1884, vol. I, part 2; vol. II, part 2; vol. III, part 1.

SMITHSONIAN INSTITUTION,

OTIS T. MASON.

April 27, 1899.

THE LATIMER COLLECTION OF ANTIQUITIES

FROM

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BY

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[FROM SMITHSONIAN REPORT FOR 1876.]

ETHNOLOGY.

THE LATIMER COLLECTION OF ANTIQUITIES FROM PORTO RICO IN THE NATIONAL MUSEUM, AT WASHINGTON, D. C.

BY OTIS T. MASON.

The remarkable beauty and finish of the stone implements of Porto Rico and others of the Antilles Islands are not wholly unknown to students of American Archæology. Now and then a small collection has found its way to London, Copenhagen, or New York; but they had never been collected in sufficient numbers for a comparative study until this important gift was bestowed on the Smithsonian Institution. For the convenience of description, the specimens may be separated into the following classes: *pottery, celts, smoothing-stones, mealing-stones, stools, discoidal and spheroidal stones, beads, cylinders, amulets, rude pillar-stones, mammiform stones, masks, and collars.* In some of these classes the objects are so similar to those found in other parts of America and throughout the world, that the briefest description will suffice. In others the number of specimens is so large, and the objects so rare, as to merit the most careful scrutiny and description. Whether from accident or design, there is not in all the collection a single flaked or chipped implement or weapon. Indeed, I have searched in vain in the National Museum for flaking or chipping from a Carib area. Although the historians of the voyages of Columbus mention arrows pointed with stone, they more frequently speak of bone, teeth, and shells as the materials used. Herrera, in speaking of their celts, says that they excavated their canoes with flint implements. (Herrera, Stephens's Translation, i, p. 60.)

POTTERY.

There is not an entire vessel in the collection, all of the specimens being fragments of variously shaped, coarse, red pottery, well baked, one or two pieces being glossy on the surface. (Figs. 1 and 2.) Nearly all of the ornamentation is produced by animal forms luted on. The most of these are monkey heads adorned with scrolled, circular, and fluted coronets, and by deeply incised lines, often forming very ingenious patterns. Others bear human faces, all grotesque, and the figures of mythological animals. (Figs. 3-7.) In one of them a W-shaped wreath or festoon is luted on the outside. (Fig. 8.) A fragment of the bottom of a cup or jar deserves especial mention, on account of the ingenious labyrinthine design traced on it by a deep furrowing, produced evidently by a sharp instrument when the vessel was soft. (Fig. 9.) This bold, deep tracing is characteristic of all the ornamentation on the

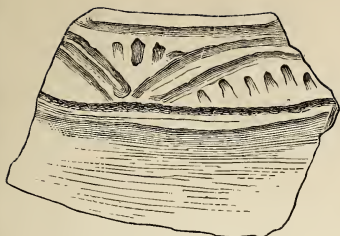


FIG. 1.—Fragment of a jar. $\frac{1}{2}$.



FIG. 4.—Handle from the edge of a dish. $\frac{1}{2}$.



FIG. 2.—Fragment of a shallow dish. $\frac{1}{2}$.



FIG. 5.—Handle from the side of a dish. $\frac{1}{2}$.



FIG. 6.—Handle from the edge of a dish. $\frac{1}{2}$.



FIG. 3.—Handle from the edge of a dish. $\frac{1}{2}$.



FIG. 7.—Handle from the side of a dish. $\frac{1}{2}$.



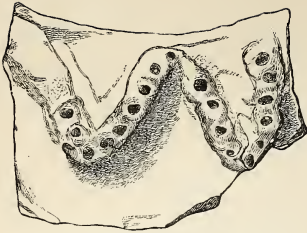


FIG. 8.—Fragment of pottery, with wreath luted on. $\frac{1}{4}$.



FIG. 9.—Bottom of a vase with the pattern traced in it. $\frac{1}{2}$.

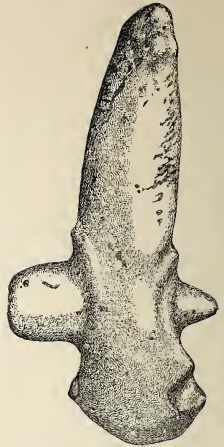


FIG. 11.—Celt and handle of polished jadeite. $\frac{1}{6}$.

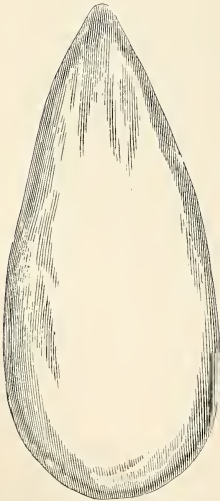


FIG. 10.—Polished, oval-sectioned celt. $\frac{1}{4}$.



FIG. 12.—Celt of jadeite in a handle of wood, Turk's Island. $\frac{1}{6}$.

pottery. Precisely similar fragments are in the National Museum from San Domingo, and, indeed, many of the pieces from southern Central America closely resemble them in quality and material.

CELTS.

The celts, one hundred and thirty-five in number, are of the very highest order of workmanship, being beautifully shaped, and many of them the most highly polished stone implements in the National Museum. The material is fine grained, and varies in color from black to nearly white, many of them being of a jadeite green. In shape, nearly all of them belong to Evans's third class, or oval-sectioned, and the great majority resemble his figure 75 so closely that I feel sure he is right in hesitating to believe the celt figured in his work to have been made in Scotland. (Fig. 10.)—(Evans, *Stone Imp.* p. 118. The use to which these polished celts was put, or, more correctly speaking, the manner of hafting them, is graphically illustrated in the accompanying sketch of a celt inserted in a mortise in a handle of hard red wood and found in a cave in Caicos or Turk's Island, by Mr. George J. Gibbs, and kindly lent by him to be cast and engraved. (Fig. 11.) A still more interesting and precious relic, from the same locality, and found by the same gentleman, is that given in figure 12, which represents a celt in the handle, the whole being gracefully carved out of a single piece of jadeite.

A beautiful ax, similarly carved from a single piece, is figured and described in Jones's *Aboriginal Remains of Tennessee*.—(Smithsonian Contributions, No. 259.)

Those interested in comparative archæology will take great pleasure in comparing these with figures 91, 92, and 93, of Evans's *Ancient Stone Implements*. This mode of hafting suggests that these oval-sectioned celts, set in their handles with the edge in a line with the haft, were rather battle-axes than industrial tools, although this is mere conjecture.

The celts in the Latimer collection vary in section from circular to oblong elliptical, in length from 1.75 to 12 inches, in width from .75 to 6.5 inches. The chord of the edge is often oblique to the axis of the stone. Some have almost semicircular edges; of others the edge is nearly a straight line. A few are so unique as to deserve especial mention. The figures in the margin represent, throughout this paper, the number of the specimen in the ethnological collection of the National Museum.

16893. A large, mottled, greenish, flat celt, pointed at the butt, fractured. Length 11.2, width 6.5, thickness 1.95 inches. Mr. Gibbs also sends drawings of two large flat celts, similar to this one and the three following, from Turk's and Caicos Islands. The occurrence of these large polished celts over so wide an area, corresponding in fact to that of the Caribs in Columbus's day, coupled with the frequent allusions of Herrera, Peter Martyr, and others to dug-out canoes, shaped like trays, and capable of holding from one to one hundred and fifty persons, leads

us to a conjecture as to their use, and reminds us of the Indians of the northwest coast, where similar crafts are still made with stone implements. Some of the different methods of hafting are illustrated in Dr. Charles Rau's work on the archæological collection in the National Museum.—(Smithsonian Contributions, No. 287, Appendix.)

15899. A large, dark-bluish, flat celt, with the butt abruptly rounded and edged; that is to say, both ends are edged nearly alike. The sides are quite sharp and nearly parallel; length 9.34; width 5.5, and thickness 1.75 inches. Fig. 13.

16900. A dark slate-colored flat celt, pointed at the butt. Length 10.8, width 5.2, and thickness 1 inch.

16901. A reddish-brown flat celt, pointed at the butt. Length 9.5, width 5, thickness 1.55 inches.

There is a flat celt in the collection from Guiana, from which the foregoing large celts cannot be distinguished.

16978. A small, almost cylindrical, greenish-black celt, highly polished, and having two chisel edges, one at either end.

16965. A small polished celt, with the blade very much expanded at the edge.

16868. A dark reddish specimen, rough and pecked on the sides, as if to aid in hafting.

16974. A small and beautifully polished, nearly cylindrical celt, edged at both ends, but the edges are not in the same plane. (Fig. 14.)

16931. A dark-greenish celt, with flat sides, and the butt quite squarely truncated. (Fig. 15.)

16938. A flat-sided celt, somewhat resembling No. 16931.

16870. This specimen has a rough indentation around it, as if to aid in hafting.

8031. A large, dark-red, hatchet-shaped, broad-edged celt, with a deep encircling groove, as if for a handle. This is the only stone celt or ax that furnishes a clear example of grooving for any purpose. (Fig. 16.)

17039. A flat paddie-shaped stone, grayish-white, the blade circular, the handle slender and tapering. (Fig. 17.)

SMOOTHING AND SHARPENING STONES.

It is to be understood, in speaking of these objects as smoothing-stones, that we do not know what they were used to smooth, or whether they were used for any such purpose. We use the name for convenience of classification, and shall readily change it as soon as their function is ascertained.

17034. A polished flat stone, subtriangular, one side being quite straight, the other flaring out near the base. The lower edge is slightly curved, about half an inch wide, and exceedingly smooth.

17035. This is very similar to the last named, but the sides are more symmetrical. (Fig. 18.)



FIG. 13.—Massive polished celt. Nearly $\frac{1}{4}$.



FIG. 14.—Two-edged polished celt. $\frac{1}{4}$.

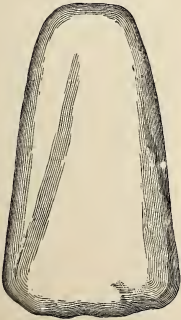
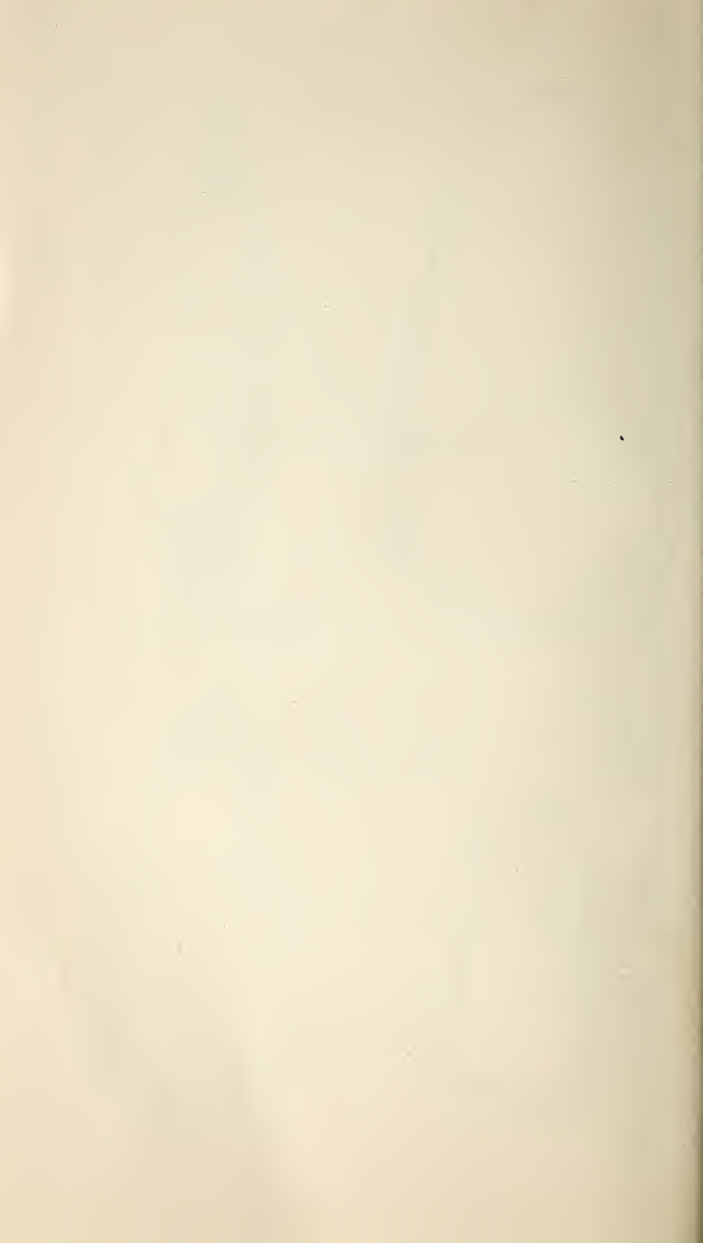


FIG. 15.—Flat-sided truncated celt $\frac{1}{4}$



FIG. 16.—Grooved celt. $\frac{1}{4}$.



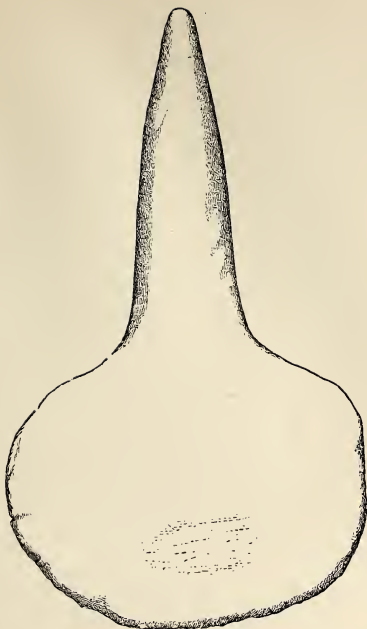


FIG. 17.—Paddle-shaped celt. $\frac{1}{2}$



FIG. 18.—Smoothing stone. $\frac{1}{2}$





FIG. 19.—Boot-shaped smoothing-stone. $\frac{1}{4}$.



FIG. 20. —Bell-shaped pestle.

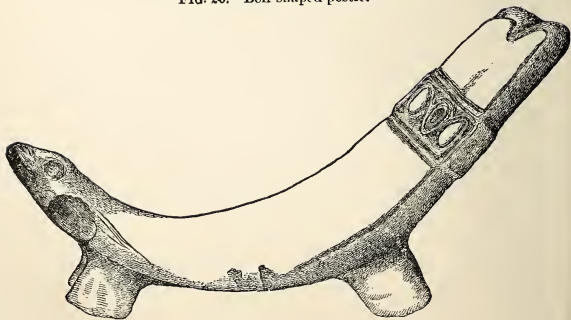


FIG. 21.—Animal-shaped stone stool. $\frac{1}{4}$.

17036. Similar to the last two, but more triangular; the sides are scarcely curved.

17037. A somewhat pestle-shaped specimen, but twisted like a horn; the shaft is crooked, the lowest part bulbous, and the bottom tolerably smooth. Rougher than the foregoing.

17038. A boot-shaped specimen, the top bent forward and pointed, and the toe coiled upward. It is somewhat smooth on the sole. (Fig. 19.)

17055-57. These are small slender stones, such as are called whet-stones or sharpening stones by writers on stone implements.

MEALING IMPLEMENTS.

These will be treated of as the upper and the nether millstone, or simply as the upper and the lower stone. They are nearly or quite all of volcanic material, and resemble in shape and wear implements used for grinding various kinds of food in Central America. Some of the pestles still have a burnished, oily appearance on the lower end, as if caused by the preparation of chocolate, for which, probably, many of them were employed. The various vegetable substances used by the natives of the West Indies are given in Herrera, and are referred to frequently in Irving's Columbus. These stones are so characteristic of this region that I will describe each one briefly.

Upper stone.

17031. A short bell-shaped pestle, having a double ridge and an intervening furrow around the upper end.

17032. A rough bell-shaped pestle, with a rude human face on the top. Precisely similar ones are found in San Domingo, (Flint Chips, pp. 227, 230, 231;) but, in many cases, the human face is replaced by the head of an animal. (Fig. 20.)

17040. A light-yellowish stone, in the shape of a cross, probably a worn-out pestle. The top is notched.

17066. A small almost-cylindrical pestle.

17067. A conoid, oblong pestle.

17068. A very small conoid pestle, 1.5 in. in height.

17073. A napiform muller, side cylindrical; diameter 4 in., height 1.5 in.

17074. An oblong flat stone, resembling a muller, and having a groove all around the side like a hat brush.

77110. A massive, light-colored, polished limestone pestle; the base is almost cylindrical, but the upper part is a four-sided prism.

Lower stone.

17061. A small, hemispherical, bowl-shaped mortar, with a swelling or prominence at one point on the rim.

17062. A small, oblong, dish-shaped mortar, deeply concave.

17063. A boat-shaped mortar or dish, sharp at each end, deeply concave. A very beautiful and unique specimen. Length 16.5 in., width 8.2 in., height 4.75 in.

17064. A semi-ovoid, deeply concave, tray-shaped mortar, 17 by 11 inches.

17065. Small cup-shaped mortar, similar to the paint mortars from the United States. Herrera repeatedly mentions the painting of their bodies black, white, and red by the Indians of the West Indies.

17077. A small four-legged metate, slightly dished in the middle, but flat-bottomed. This specimen resembles Fig. 8, on page 229 of *Flint-Chips*, and may have been a stool, the wavy elevated rim precluding the use of a muller, and a flat bottom rendering the use of a pestle quite improbable. I shall speak of this subject more fully a little further on.

17078. A massive three-legged metate, of a porous, dark, volcanic stone. It is slightly sagged and depressed on one edge, and elevated at one end. They have a backward slant, so as to resist the pressure of the person operating at the higher end. Length of slab 21 inches, width 14 inches.

17079. A massive three-legged metate, similar to the foregoing, but the surface is nearer a plane. The dimensions are the same.

STOOLS.

The single specimen under this head, (No. 17076,) Fig. 21, has been classed, hitherto, with metates. It is a thin and deeply-sagged slab of grayish sandstone, and stands on four short legs. At the less elevated end three projections are neatly carved to represent the head and fore-feet of a turtle. The eyes are deeply sunken as if for the insertion of pearls or jewels. The higher end is abruptly elevated about six inches, and is crossed by a band ornamented with a scroll which occurs with certain modifications on other objects. There is a decided warping or twist in the upper surface, the ornamentation of which, as suggested by Dr. Rau, renders the idea of its having been a metate doubtful. In Fig. 22 another view is given of the stool, which shows some of its characters to better advantage. The following quotation from Stephens's translation of Herrera (*Herrera, Stephens's Translation*, i, 55) fully establishes its use: "When the ship was ready to sail (from Cuba) the Spaniards returned on the 5th of November with three of the native Indians, saying they had traveled twenty-two leagues and found a village of fifty houses, and that they contained about 1,000 persons, because a whole generation lived in a house; and that the prime men came out to meet them, led them by the arms, and lodged them in one of the new houses, *causing them to sit down on seats made of a solid piece of wood in the shape of a beast with very short legs and the tail held up, the head before with eyes and ears of gold*, and that all the Indians sat about them on the ground." This object being of stone, there might still have been room

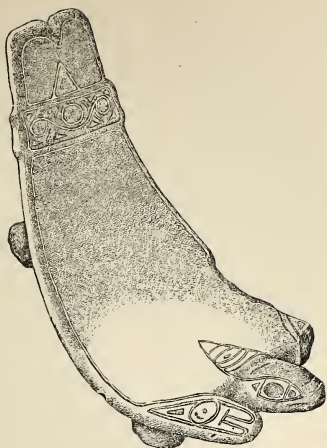


FIG. 22.—Upper view of Fig 21.

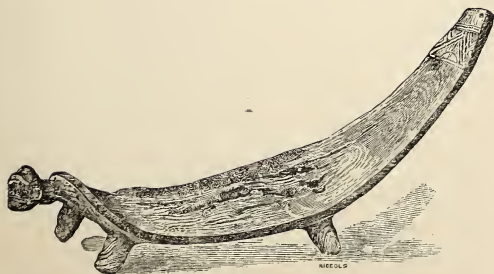


FIG. 23.—Wooden stool from a cave in Turk's and Caicos Islands. 8.

FIG. 24.—Wooden stool from Turk's and Caicos Islands. $\frac{1}{2}$

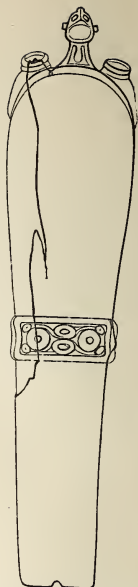


FIG. 25.—Upper view of Fig. 24 restored. $\frac{1}{8}$.

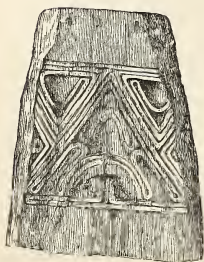


FIG. 26.—Ornament in relief on the upper part of Fig. 23. $\frac{1}{8}$.

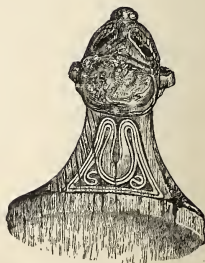


FIG. 27.—Head-ornament of Fig. 24. $\frac{1}{8}$.

for doubt but for the timely arrival of confirmatory evidence while the engraving was being executed. Prof. William M. Gabb has sent to the National Museum, with the joint compliments of himself and Mr. D. R. Frith, of Turk's and Caicos Islands, two wooden stools, fac-similes of those spoken of in Herrera. (Figs. 23 and 24.) Fig. 25 is an attempt to restore Fig. 24, which has been mutilated, not by the tooth of time, but by the hatchet of the vandal. These objects are made of a very hard dark wood, and are just fitted to an ordinary man when reclining as in a hammock, from which the pattern of a stool is possibly derived. These two specimens were found in a cave. The stone stool described above is a fac-simile, except in size, of those sent by Professor Gabb, the scrolled ornamental band across the stone stool being represented in one of the wooden ones by an elaborate scroll-work in relief. The mathematical accuracy in this and other drawings is no exaggeration of the originals. In the wooden objects, as in the stone one, the eyes excavated for precious stones are plainly visible, but the jewels are wanting. (Figs. 26, 27, and 28.) Fig. 26 is the tail ornament of Fig. 23, and is somewhat effaced. Figs. 27 and 28 are the head ornament and scrolled band of Fig. 24. The use of these stools of state is frequently mentioned by the historians of the voyages of Columbus. (Irving's Columbus, i, 194, 234.) One of the provinces of Cuba paid tribute in them. (Stephens's Herrera, i, 63, 74.) Especial thanks are due to Professor Gabb and Mr. Frith for the timely opportunity of illustrating what was previously a rather dark text to me.

SPHEROIDAL AND DISCOIDAL STONES.

It is impossible to tell the uses to which these stones were put. It is something to know that they show signs of use, and testify that in the Antilles, as elsewhere in the world, nature has gently led her children by the hand, furnishing them with their simplest implements ready-made, and thereby imparting the first lessons of civilization.

17046. A small kidney-shaped pebble, with natural perforations.

17034. A small egg-shaped boulder, similar to those used by the Dakota Indians in their flail-like war-clubs.

17058. A spindle-shaped pebble, covered with a deposit of iron. It seems to have been used in grinding paint.

17069. A spherical stone, diameter 3.6 inches.

17070. A similar stone, 2.75 inches in diameter.

17071. A rough spheroidal stone.

17072. A discoidal granite pebble.

17131. A massive spheroidal stone, diameters 8.95 and 10.2 inches. A small perforated disk of soft material like soapstone, and carved to resemble the spindle-whorls found in various countries is shown in Fig. 29.

BEADS.

17042. An oblong syenite bead, not perforated.

17043. A similar bead to the foregoing. The hole not coming out as

designed, a second perforation was attempted. This is a fine specimen of perforation, 2.4 by 1 inch. (Fig. 30.)

17044. A small oblong bead, unfinished, showing the striæ of the preliminary grinding.

17053. A string of seventy small chalcedony beads, about the size of peas. They are quite perfectly rounded and perforated—some of them in two directions. This is the most remarkable sample of aboriginal stone polishing and drilling that has ever come under the observation of the writer. It is exceedingly doubtful whether another collection of so many witnesses to savage patience and skill has been found anywhere in one specimen. We are here reminded of the "eight hundred beads of a certain stone called *ciba*, given by Guacanagari to Columbus on his second voyage."

17059-'60. Slender cylinders of quartz, 5.5 by .6 inches.

AMULETS AND STONE IMAGES.

Very little is known of the religion of the Indians living on these islands. Herrera mentions that a sailor of Columbus reported the seeing of a man with a white tunic down to his feet on the island of Cuba, (Stephens's Herrera, i, 131,) and that an old Indian reported a cacique of a certain island who was clad like one of the Catholic priests. (Stephens's Herrera, i, 134.) Two chapters (Herrera, Dec. 1, Book iii, chap. 3, 4,) are devoted to the customs and worship of the Caribs, but little light shines from them upon our stone images. As in many other instances, an accurate description may prove to be the key of the enigma.

17047. A small lizard-like figure of a black slaty material. The head and tail are broken off; the feet are doubled against the body, represented as covered with scales. Frequent references are made to lizards and alligators in the old chronicles. (Fig. 31.)

17048, '49, and '50. Small kneeling figures made of white marble. The arms and legs are represented as pinioned back and the shoulder-blades are perforated for suspension. These and the two following seem to have been worn as amulets. (Fig. 32.)

17051. A small kneeling human figure, having the back of the neck perforated. The face is that of an animal, although it is somewhat mutilated and indistinct. (Fig. 33.)

17052. A small erect human figure of green jadelike material, perforated through the head from ear to ear. (Fig. 34.)

The inhabitants of Hispaniola, on the authority of Friar Roman, (Irving's Columbus, I, 390,) had small images of their gods which they bound about their foreheads when they went to battle.

The larger stone images or pillar-stones seem to be out of place, when ranged by the side of the elaborate polished objects. They are strikingly similar in rudeness and in general design to some brought from Central America by the Hon. E. G. Squier. The only feature that seems to rise above the most savage simplicity of design is the fact that in some of

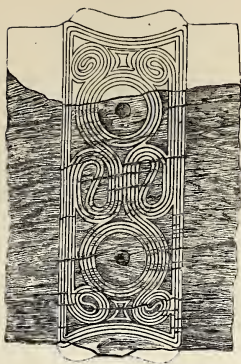


FIG. 28.—Scrolled ornament in relief of Fig. 24. $\frac{1}{4}$.



FIG. 29.—Disk-shaped carved stone. $\frac{3}{4}$.



FIG. 30.—Perforated bead. $\frac{3}{4}$.

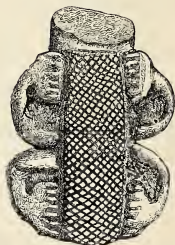


FIG. 31.—Lizard-shaped Amulet. $\frac{1}{4}$.

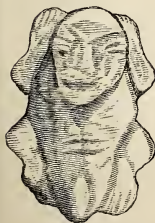


FIG. 32.—Amulet of marble. $\frac{1}{4}$.



FIG. 33.—Amulet. $\frac{3}{4}$.



FIG. 34.—Amulet of greenish stone. $\frac{1}{4}$.

those from both districts a human face is carved on the stomach of the human figure represented by the whole stone. According to Friar Roman, (quoted in Irving's *Columbus*, I, 390,) each cacique had a temple or house apart where an image of his Zemi, or tutelary deity, carved of wood or stone, or shaped of clay or cotton, generally in some monstrous form, was preserved.

17125. An irregular slab, having a rude face in relief on one side. Seven parallel lines extend from the chin downward, as if to imitate a beard; 16.1 by 7.5 inches.

17126. A fish-shaped boulder, 28.5 inches long. On the narrow end is a sitting human figure, having the hands clasped under the chin and the feet doubled up with the soles together. On the stomach is a circle, seeming to have been designed to represent a human face.

17127. A boot shaped slab, on the broad end of which is a rude human face, crowned with a chevroned band across the forehead.

17128. An irregular kite-shaped slab, bearing on one side a human face. On the right side of the face are two hieroglyphic marks, the one in the shape of a heart, and the other resembling a cleaver with two small furrows running from the edge. Now and then a heart-shaped stone implement turns up in our collection; but we are not to suppose that the American aborigines used this to symbolize the human heart itself or the domain of Cupid.

17129. A rude slab of yellow stone, 28.5 by 13 to 10 by 6 inches. On the flat face is a human figure very roughly furrowed out, bearing on its stomach an inverted face. On the top of the slab a circle is furrowed out. The carving on this and the foregoing slabs was apparently done by pecking out the depressions with stone chisels, leaving the eyebrows, nose, and lips in intaglio.

17132. An ingenious figure of a human female head and breasts in coral; the natural spheroidal swellings on the material forming the head and breasts.

17142. A stalactite bearing a rude carving of a human face.

17150. A fragment of a pillar-stone, the face of a man deeply carved in its surface.

17281. A rude pillar-stone, 41 inches in height, the upper part being a kneeling figure with its face upturned, its huge mouth open, and its hands clasped under the chin. Two circles are carved on the back.

MAMMIFORM STONES.

These strange and beautiful objects present, in more than one-half of the specimens, the image of a human figure lying on the stomach, with the face more or less upturned, the mouth open, and the countenance wearing a tortured look. The other end of the stone represents the lower extremities of the body, so doubled up as to expose the soles of the feet against the rump. On the back of the prostrate form is a conoid prominence, beautifully rounded up, straight

or slightly concave in outline in front, a little convex in the rear, swelling out on one side slightly more than on the other, and descending more or less lower than the top of the head and of the rump so as to form anterior and posterior furrows. The whole appearance cannot fail to remind the student of the legend of Typhoeus killed by Jupiter with a flash of lightning, and buried beneath Mount *Ætna*. Though no one could use this resemblance as an argument in favor of early communication between the Greeks and the primitive people of Porto Rico, yet the Typhoean legend has been found in many lands, and it is quite possible that a similar myth may have been devised in various places to account for volcanic or mountainous phenomena. The Antilles are all of volcanic origin, as the material of our stone implements plainly shows. I am indebted to Prof. S. F. Baird for the suggestion that, from the sea, the island of Porto Rico rises in an abrupt and symmetrical manner, highly suggestive of the mound in the mammiform stones, so that with the aid of a little imagination we may see in these objects the genius of Porto Rico in the figure of a man, a parrot, an alligator, an albatross, or some other animal precious in these regions where larger animals are not abundant, supporting the island on its back. The Typhoean figure undergoes many modifications in the series examined, and doubtless, if the specimens in other collections could be placed by the side of these, many more interesting results could be reached. The human face is often replaced by the head of a bird or of some other animal, but the feet when distinguishable are always human. The bottom of the stone is in striking contrast with the upper surface. While the latter is nearly always exquisitely polished, the former is always very rough, either from use or never having been finished. The bottom is sometimes flat, sometimes convex, but most frequently sagged up in the middle and hollowed out into a cymbiform cavity. In such cases the object rests unsteadily upon the chin and knees, the under side of which is polished by wear. In quite a number of them the prostrate man cannot be clearly made out, his head and lower extremities being presented by simple swellings or knobs. A variety of details is noticeable, which will appear in the following description of the objects, since I have been unable to find two precisely alike.

16980. A highly polished specimen of marble. There is a wide head-band across the forehead of the figure, ornamented with chevrons and hemispherical cavities. The right side is the fuller, the bottom concave and rough, and the apex slightly battered. This battering is doubtless an accident, as none of the others exhibit it. Length 10.3, width 4.5, height 5.3 inches. (Fig. 35.)

16981. This specimen is of a light-bluish material. The head and breast of an albatross replace the human head. On either side of the breast and on either side of the front of the mamma is a cup-cutting. The furrows at the base of the mamma in the front and rear are wide and deep. The bottom is warped up and hollowed out. Length 11.95, width 4.5, and height 4.9 inches. (Fig. 36.)

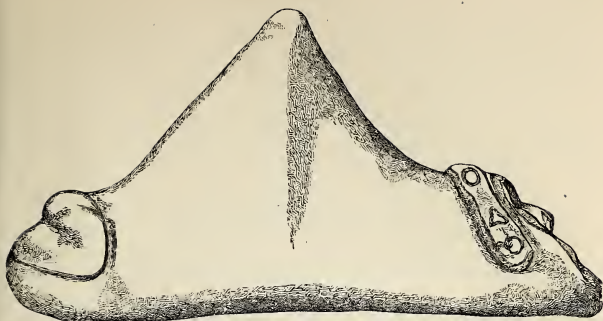


FIG. 35.—Mammiform stone, with human face. About $\frac{1}{4}$.

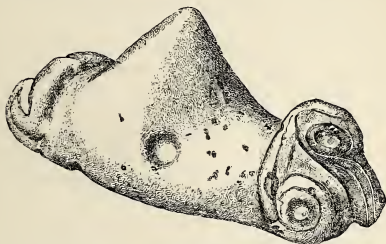


FIG. 36.—Mammiform stone, with the head of a sea-bird. $\frac{1}{4}$.

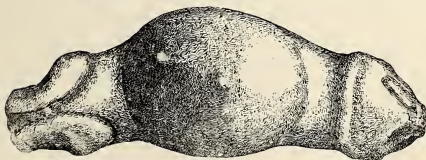


FIG. 37.—Mammiform stone, upper view, greatly warped. $\frac{1}{4}$.

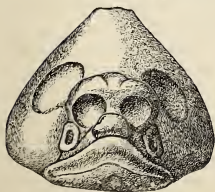


FIG. 33.—Mammiform stone, front view. $\frac{1}{4}$.



FIG. 39.—Mammiform stone, upper view. $\frac{1}{4}$.

16982. This specimen is of a dark volcanic material. The face and feet are both well turned up. The anterior and the posterior furrows are deep, the left side bulged out, and the bottom slightly hollowed. Length 11.6, width 4.3, and height 5.65 inches. (Fig. 37.)

16983. A rough specimen made of dark volcanic stone. The head and feet are close to the mamma, leaving very slight intervening furrows. The bottom is hollowed out. Length 7.3, width 3.6, and height 3.7 inches.

16984. A large specimen, made of white marble. Across the forehead is a chevroned band, the triangular spaces of the chevrons being filled with straight lines parallel to the lines of the chevron consecutively. The right side is fuller than the left, and the bottom slightly hollowed. Length 12.3, width 5.9, and height 6.35 inches.

16985. A dark volcanic stone, broken. The head has a high ridge running above the forehead, making a deep furrow between it and the mamma. The bottom is quite flat. Length 11.1, width 5.5, and height 7.7 inches.

16986. A rough specimen, made of volcanic stone. The face and feet are much flattened out, and the anterior and posterior furrow are broad and shallow. The left side is fuller than the right. The mamma is slightly winged, or angular, on the sides, front, and rear. The bottom is nearly flat, and very rough. Length 8, width 3.55, height 3.8 inches.

16987. A dark-colored specimen, of volcanic material. The head is grotesque and high-ridged, making the front furrow deep. Across the thighs is a chevroned band. The feet are twisted around so as to bring the toes against the rump. The right side is fuller than the left. The bottom is warped up and hollowed out. There are four shallow cylindrical depressions on the mamma on a level with the furrows, one on either side of the anterior and posterior portions. Length 11.65, width 4.6, height 4.05 inches. (Fig. 38.)

16989. A very smooth bluish-gray specimen. The head resembles that of a parrot, and there is a perforation through the beak. The thighs of the prostrate figure are ornamented with chevrons and dotted circles. The right side is fuller than the left, and the bottom elevated and hollowed out. Length 6.85, width 3, height 3 inches. Although this is a very smooth specimen, the different style of illustration adopted by the artist exaggerates this feature unduly, in comparison with others which are hatched in the engraving. (Fig. 39.)

16990. A polished specimen, made of mottled black and white marble. The head and posterior portion are very much flattened out, making the furrows long and shallow. The left side is fuller than the right, and the bottom is elevated nearly an inch, and hollowed out. Length 10.75, width 4.3, height 4.1 inches.

16991. A rough volcanic stone. The human figure is not visible in this specimen, the ends being simple knobs, between which and the base of the mamma there are slight furrows. The bottom is flat. If we were

looking for the evolution of higher from lower forms, this stone would typify the lowest grade, or possibly the starting-point in the departure from a conical implement. Length 7.9, width 3.4, and height 4.2 inches.

16992. A light-bluish specimen. The head and feet are quite close to the mamma, making the furrows narrow and shallow. The right side is fuller than the left, and the bottom smooth. Length 8.2, width 4, height 4.45 inches.

16994. A dark, mottled, volcanic stone. The face has been very much battered by time. There is an elevated band across the forehead, making the furrows narrow and deep. The right side is fuller than the left, and the bottom elevated and hollowed out. Length 7.95, width 3.5, height 4 inches.

16995. A light-blue volcanic stone. The furrows are almost wanting, and, as in a specimen previously mentioned, the feet are reversed. The bottom is very roughly hollowed out. Length 5.6, width 2.4, height 3.6 inches.

16996. This specimen is made of yellowish white marble. The furrows are broad and shallow. The right side is fuller than the left, and the bottom hollow. The plane of the bottom is also twisted or warped, due probably to the original form of the stone. Length 10.8, width 4.6, height 4.55 inches.

16998. A dark volcanic specimen. The head-band abuts on the mamma, leaving a very slight furrow in front, but the posterior furrow is deeper. On the sides of the mamma are cup-cuttings. The bottom is elevated and hollow. Length, 6.15, width 3.2, height 2.7 inches.

17000. Of mottled marble. The head resembles that of a hog or peccary, but is grotesque. The feet are human; the furrows are broad and deep; the left side is fuller than the right, and the bottom is deeply hollowed. Length 12.55, width 5.5, and height 5.3 inches. (Fig. 40.)

17001. A smooth specimen, made of volcanic material. The furrows are broad and deep, the right side swelled out, and the bottom elevated and hollow. Length 8.55, width 4.15, height 4.4 inches.

17002. A rough specimen, made of marble. The furrows are narrow and shallow, the left side full, the bottom elevated and slightly hollowed. This specimen is much weather worn. Length 8.5, width 4, height 4.6 inches.

17003. A fine specimen, made of white marble. The face is well executed, the head-band being wide and ornamented with cup-cuttings and frets. The feet are broken off. Instead of a cymbiform cavity in the bottom, there is a deep cup-cutting, around the border of which is a perfectly circular furrow. This object has been battered by secondary use as a pestle. The dimensions are estimated. Length 12.8, width 4.4, height 3.75 inches.

17004. Of a rough volcanic material. The head resembles that of a hog or peccary. The furrows are deep. There are two deep cup-cuttings at the feet. The left side is full and the bottom elevated. Length 9.65, width 4.4, height 3.5 inches.

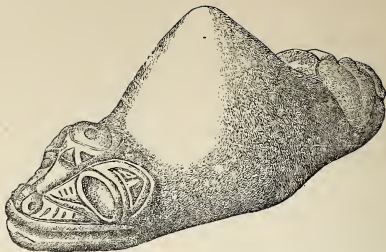


FIG. 40.—Mammiform stone, quarter view. $\frac{1}{4}$.

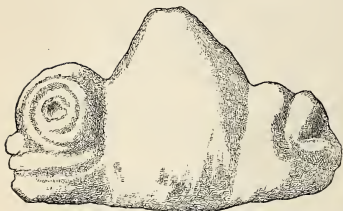


FIG. 41.—Mammiform stone with owl-shaped head. $\frac{1}{4}$.

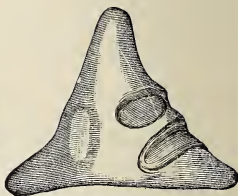


FIG. 42.—Highly-polished mammiform stone. $\frac{1}{4}$.



FIG. 43.—Mammiform stone with frog-like ornament. $\frac{1}{4}$.

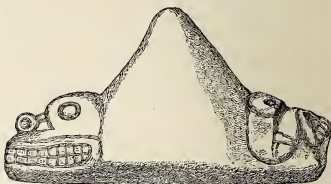


FIG. 44.—Mammiform stone, with alligator head. $\frac{1}{4}$.



FIG. 45.—Head of a mammiform stone, upper view. About $\frac{1}{4}$.



FIG. 46.—Foot of a mammiform stone, upper view. $\frac{1}{4}$.

17005. A dark specimen, of volcanic material. The head resembles that of an owl or parrot. The furrows are deep, the right side full, and the bottom flat. Length 4.95, width 2.9, height 2.95. (Fig. 41.)

17006. A dark specimen, of volcanic material. The head resembles that of a parrot. The furrows are broad and shallow. The left side is full, the bottom slightly elevated and hollow. Length 6.3, width 2.55, height 2.95 inches.

17007. A smooth reddish specimen, of volcanic material. The head is like that of a peccary. The furrows are wide and shallow, the left side full, and the bottom well elevated and deeply hollowed. Length 11.35, width 5.2, height 4.8 inches.

17008. A light-colored specimen, of volcanic material. The furrows are wide and deep, and the bottom hollow. The length 10.9, width 5.3, height 5.5 inches.

17009. A small mottled specimen, of dark volcanic stone. The face is slashed with deep lines. The furrows are deep, the right side full, and the bottom pecked in the middle and worn quite smooth at the ends. Length 5.8, width 2.1, height 2.2 inches.

17010. A highly polished specimen, made of a dark green stone, similar to the material of the most beautiful celts. The ends and top taper out finger-like. The human face is carved on the front of the mamma. The bottom is elevated and roughened, but not hollowed. This is a highly finished and unique specimen, departing quite widely from the typical form, and resembling no other in the collection. (Fig. 42.)

17011. A curious specimen, made of mottled flinty limestone. The projecting ends are entirely wanting. The front of the mamma or cone exhibits a grotesque human face. The rear is carved to represent a frog, whose nose forms the apex of the stone, and whose back and hind legs, drawn up, fill the remaining surface. The fore legs pass down the sides of the cheeks and under the lower jaw of the human face in front. This is truly a marvel of aboriginal art, and may be set down as the best specimen of this class in the collection. (Fig. 43.)

17012. A small specimen, of white marble. The grotesque head resembles that of an alligator. The feet, as usual, are human. The thighs are ornamented with chevrons and circles. The furrows are narrow and shallow, the left side full, the bottom unusually cymbiform. Length 4.85, width 2, height 2.75 inches. (Fig. 44.)

17013. A small smooth specimen, of yellowish marble. This is a very plain object, without carvings of any kind. Length 2.75, width 1.35, height 2.3 inches.

17014. A small rough specimen, of mottled volcanic material. The feet are broken off. The furrows are shallow, and the bottom hollowed out. Length 3.6, width 1.75, height 2.05 inches.

17015. Head of a mamiform stone, of volcanic material.

17017. The head of a mamiform stone, of white marble. The head-band is ornamented with chevrons and three cup-cuttings. This was

undoubtedly a very beautiful implement. (Fig. 45.) The absence of duplicates in such a large collection is somewhat striking, and yet testifies to the richness of fancy in the artists. This figure, however, is almost identical in material, physiognomy, and the shape and ornamentation of the head-band, with the head of number 17003.

17018. The foot of a marble mammiform stone. The feet are finely expressed; indeed, they are the best-looking pair of feet in the whole lot. The thighs are ornamented with chevrons and cup-cuttings. This may have been the foot of the object to which the foregoing number was the head, or more probably to the broken specimen described as No. 17003. If not, it is a relic of a very finely wrought implement. (Fig. 46.)

MASKS.

It requires a slight stretch of the imagination to call the objects included in this class masks. The only ground upon which we do so is their resemblance to many of the false-faces or masks worn in pantomimes. These, of course, never could have had any such use. Three of them are somewhat similar to the objects just described. The bottoms are hollowed out, there are furrowed depressions at the base of the prominence, and the mammiform elevation is grotesquely observed, being replaced by a face, the Aztek nose forming the apex of the stone. The Typhoean figure is sometimes present.

17988. Mask of gray volcanic material. The head and foot are simple knobs. The forehead and cheeks are furrowed and the bottom elevated and very hollowed. Length 8.65, width 4.8, height 6.25 inches. (Fig. 47.)

17993. Mask of mottled volcanic stone. The ends are simply rounded and the bottom hollow.

16997. Mask of a reddish-brown volcanic stone. The prostrate man is present, the mouth of the mask being toward his head.

Five of the masks, 17020, 17021, 17023, 17024, 17025, are more or less grotesque human faces, with cleat-like projections on the back, scarcely admitting of a doubt that they were designed for fastening to a handle or pole. (Fig. 48.) Indeed, if we were allowed to follow up the clew, these cleat-like projections might throw much light upon the furrows found at the base of the mammæ of the mammiform stones, hinting that these, too, might have served in some way or other as insignia or club-heads. But where all is conjecture we shall have to possess our souls in patience.

Three of the masks, 17029, 17030, 17031, are flat kite-shaped stones with the human face carved partly in relief on one side. (Fig. 49.) The following table gives the dimensions in inches and decimals.

17029. Length 5.1, width 4.15, thickness 2 inches.

17030. Length 7, width 4.45, thickness 1.85 inches.

17031. Length 5.9, width 3.75, thickness 1.35 inches.

There is one mask, discoidal in form, from the periphery of which two

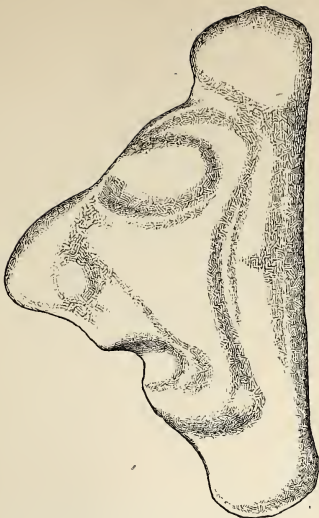


FIG. 47.—Profile of mammiform mask. About $\frac{1}{4}$.

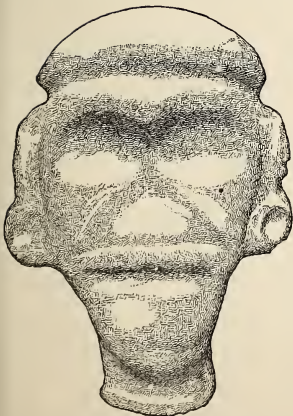


FIG. 48.—Mask with projections for attachment. $\frac{1}{4}$.

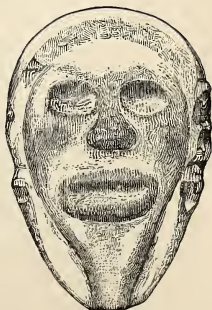


FIG. 49.—Flat kite-shaped mask. $\frac{1}{4}$.



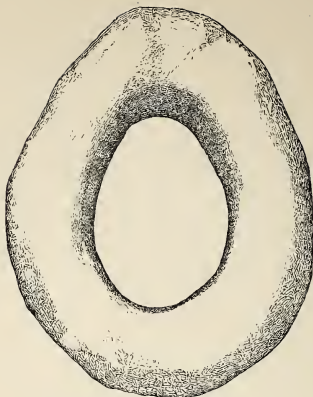


FIG. 50.—Unfinished collar. $\frac{1}{8}$.

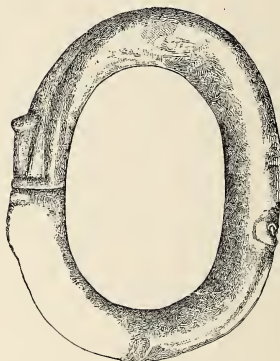


FIG. 51.—Right-shouldered massive collar. $\frac{1}{8}$.

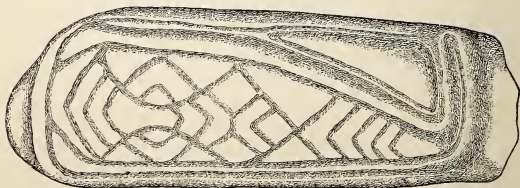


FIG. 52.—Gourd-shaped panel of a massive collar, with its ornament. $\frac{1}{8}$.

cylindrical knobs proceed, looking, again, very much like attachments for a handle. 17022 is a very rude mask of marble.

COLLARS.

The objects commonly called collars receive their name from their resemblance to horse-collars, and not from any knowledge we have of their use. There were thirty-five of them in the Latimer collection, but some were exchanged and sent away before this description was written. Four of them are yet in the rough state—so rough, in fact, that we cannot positively affirm that they were destined for collars, (Fig. 50.) None of the characteristic marks of the collars are visible. Assuming this as their probable end, they serve to show what an immense amount of labor it must have taken to reduce a stone of such great size and hardness to the slender and graceful finished object. The accompanying table gives their dimensions in inches:

Number.	External length.	Internal length.	External width.	Internal width.	Height or thickness.
17100	19	9.5	15.3	7	4.5
17101	20.8	10.2	16.9	7	5.5
17102	23.35	11.4	17.7	7.3	5.8
17103	20	11	17	6.5	3.9

Of those that are finished there are two classes—the massive oval, and the slender oblique-ovate, or pear-shaped collars. The latter are far more highly polished and ornamented than the former, and some of the ornamental patterns on the massive forms are reproduced but more elaborated on the slender variety, notably the gourd-shaped ridge surrounding the panels. One of these objects is figured in “Flint-Chips,” p. 231, but it is either wrongly drawn or represents another class entirely different from any in the Latimer collection. Another is said to be engraved in *Mem. de la Soc. du Nord*, containing Mr. C. Rafn’s report on the “*Cabinet d’Antiquités Américaines à Copenhague, 1858*,” but I have not seen it. In *Scribner’s Monthly*, August, 1875, are four woodcuts of collars pretty faithfully drawn. Both classes are marked by the presence of a projection or prominence resembling a knot on the outside of the upper limb of the circumference. This projection, always midway between the anterior and the posterior margin, is sometimes on the right side and sometimes on the left. This circumstance gives rise to two subclasses, the right-shouldered and the left-shouldered. The other marks which, by their peculiar forms, or by their presence or absence, give individuality to the different specimens are: the shoulder; the shoulder-ridge, or fillet; the boss, or swelling at the bottom; the right panel; the left panel; the panel ornament (always most elaborate on the side opposite the shoulder); the marginal prominences of the shouldered side; the panel border, or scroll; and the marginal ridge

and furrow. The marks will be better understood by the accompanying figures 51, 53, 55, 59. The material of which they are all made is a volcanic stone of different color and texture.

1. *Right-shouldered massive collars.*

17104. The shoulder resembles closely a knot of a tree, and about six inches below there is another swelling as though the knot entering above came out at this point. There is no transverse ridge beneath the shoulder. The right panel is a plain moon-shaped chamfer pecked on the stone. The left panel is a gourd-shaped space inclosed in a bead-like ridge, and has its wide end extending quite around the bottom of the collar to the chamfer so as to form a quasi-boss.

17107. The shoulder of this one is inverted bell-shaped. The shoulder ridge is a transverse swelling. The right panel is a parallel-sided chamfer. The left panel is gourd-shaped and ornamented with herring-bone furrows. The bottom of the collar is very much enlarged by the lower margin of this gourd-shaped panel. (Fig. 51.)

17108. The shoulder is bell-shaped, and beneath it is a narrow transverse ridge uniting at its extremities with the marginal ridges, which extend quite around the upper half of the collar. The right panel is an oval chamfer. The left panel is gourd-shaped, and is ornamented with lozenges, chevrons, and triangles, prettily designed to fill up the space. (Fig. 52.) This is an exquisite specimen of design and execution, and as well as many others already examined, and to be examined, indicates marked progress in the division of labor.

17109. The shoulder is a mere swelling, without any definite outline, and the shoulder ridge is wanting altogether. The right panel is a slight chamfer, the left panel a deep-furrowed triple chevron. A rather plain object.

2. *Left-shouldered massive collars.*

17105. The shoulder of this collar is a mere swelling out, as it were, of the stone. The shoulder-ridge is likewise a transverse elevation beneath the shoulder. The left panel is a parallel-sided chamfer extending from this transverse swelling quite to the bottom of the collar, where it is bounded by a transverse ridge or quasi-boss. The right panel is the gourd-shaped pattern ornamented by an oblong spiral ridge. The gourd pattern in this and other massive collars reappears in the slender variety, where it is represented by a somewhat quadrilateral panel having a looped ridge extending beyond the anterior margin.

SLENDER OBLIQUE-OVATE COLLARS.

The slender collars, which compose the greater part of the set, are more highly elaborated in every respect than the others, and differ from them so much in weight and finish as to suggest a difference or function. (Figs. 53, 55, 59.) Where so little is known concerning them, however, this is more than we can affirm.

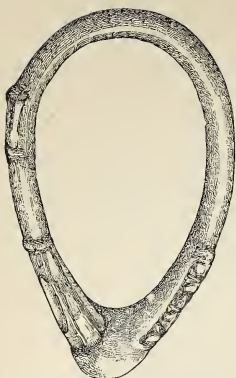


FIG. 53.—Right-shouldered slender collar. $\frac{1}{6}$.

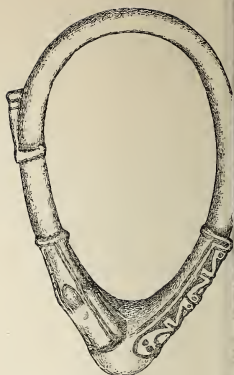


FIG. 55.—Right-shouldered slender collar. $\frac{1}{6}$.

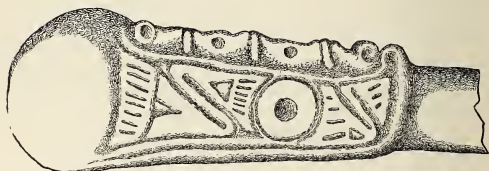


FIG. 54.—Left panel, panel-ornament, panel-border, and boss of a right-shoulder slender collar. About $\frac{1}{3}$.



FIG. 56.—Left panel of a right-shouldered slender collar, with its ornaments. $\frac{1}{2}$.

1. *Right-shouldered slender collars.*

8029. (Fig. 53.) The shoulder is distinctly bell-shaped, having a pecked chamfer on its outward portion. The transverse shoulder-ridge is quite prominent. The right or plain panel is inclosed in a quadrilateral ridge which bears on the middle of its anterior and posterior sides a very marked swelling. This is a constant feature on the anterior and posterior margins of the panel on the shouldered side, whenever this panel is present. The face of the panel is indented with an oval depression or cup-cutting. The left panel is bounded by a border-ridge, and ornamented by a large ring in the center, on either side of which a human leg drawn up is represented. (Fig. 54.) The anterior margin of this panel, which I have called the panel border, is a double scroll.

8030½. The shoulder is well expressed and the shoulder-ridge wide. The right panel is enclosed in a broad ridge with the swellings on the margins, and has a plain center. The left panel is inclosed in a double ridge and furrow looped and perforated at its upper anterior corner. This is also quite plain, although the double scroll is found on the margin. This and the foregoing specimen were given to the National Museum some years ago.

17080. (Fig. 55.) The shoulder is bell-shaped, and the encircling shoulder-ridge abuts upon the shoulder so that no line separates them. The right panel is inclosed within a ridge with the swellings, and has an oval cavity pecked deeply into its central space. The left panel is inclosed by a ridge with the loop in its upper anterior corner, and is ornamented by an elaborate winged sun-pattern. (Fig. 56.) The panel border is a wide scroll.

17085. The shoulder is quite prominent, its upper circular face rolled outward. The transverse shoulder-ridge is carried all the way around the stone. The right panel is inclosed by a ridge with the prominences, and is rough-pecked over its interior space. The left panel is inclosed by a ridge, and was formerly well ornamented, but it is now nearly worn off, whether by use or time I cannot say. The panel border is a delicate double scroll, having two of the volutes perforated. The boss, which in most of the slender collars is an immense swelling, oblique to the plane of the stone, is in this specimen rolled out like a pouting lip.

17087. The shoulder is bell-shaped. The transverse shoulder-ridge borders three sides of the shoulder—that is, it turns up along the margins of the collar. The right panel has the ridge and prominences but no ornament. The left panel is inclosed in a ridge looped on the upper anterior margin. The panel border is slightly scrolled, but much worn. The boss is ridged up on the inside of the specimen.

17088. The shoulder is a mere swelling with a slight transverse ridge. The prominences are present on the ridge of the right panel, which is ornamented with a shallow oval depression. There is no ornament on the left panel. This is a very plain specimen and rudely polished.

17089. The shoulder is bell-shaped, and the shoulder-ridge passes quite around the stone. The right panel is inclosed within a ridge with the prominences; its ornament is an oval depression whose edges are slightly in relief. The left panel is inclosed in a looped ridge, and is without ornament. The upper transverse portions of the panel-ridges encircle the stone as in Fig. 55.

17091. The shoulder is bell-shaped and grooved. The right panel has the prominences and oval depression. The left panel is wanting.

17092. Shoulder bell-shaped, and the transverse ridge beneath it encircles the stone. The right panel having the marginal prominences is roughened on its face and ornamented with a ring and dot. The left panel is much worn. The panel border is a double scroll. The boss and upper transverse panel-ridges encircle the stone.

17099. (2). A fragment containing boss and panels. The right panel with the marginal prominences and oblong oval depression. The left panel has a perforation in the marginal loop of the inclosing ridge.

2. *Left-shouldered slender collars.*

8028. The shoulder a slight rough swelling, without the subjacent transverse ridge. The left panel has the marginal prominences and a double chamfer on its face. The right panel is wanting, a simple transverse ridge marking the upper extremity, from which the stone gradually expands toward the boss.

8030. The shoulder is bell-shaped and well rolled out. The transverse shoulder-ridge is wanting, but the furrows on either side of the shoulder converge gradually, and give the appearance of the overlapping of the two ends of a hoop. The left panel is inclosed in a double ridge with the marginal prominences and is ornamented with a deep oval depression. The right panel is inclosed in a ridge with a perforated loop on its upper anterior margin, and is ornamented with chevrons, whose triangular spaces are filled with incised lines parallel to the sides of the chevron consecutively. The panel border is a double scroll with a small human face represented between the scrolls. It has been said that the human face is not seen on the collars. This is the only exception in this collection if the fragment to be mentioned next is not a portion of a collar. (Fig. 57.)

17026. A fragment containing the boss and a part of a right panel. The panel ornament is a large-featured human face. The end of this fragment is notched and perforated, as if for secondary use. (Fig. 58.) I am not positive about this fragment. If it is not a portion of a collar, it is a class by itself; and if it is, it is not like any other in the class as represented by the Latimer collection. Two objects somewhat similar are engraved in Scribner's Magazine for August, 1875, but as I have not seen the originals I cannot speak with certainty as to the resemblance between it and them.

17081. The shoulder is bell-shaped, and hollow on the top. The

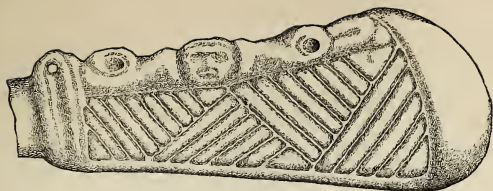


FIG. 57.—Right panel of a left-shouldered slender collar. $\frac{1}{4}$.

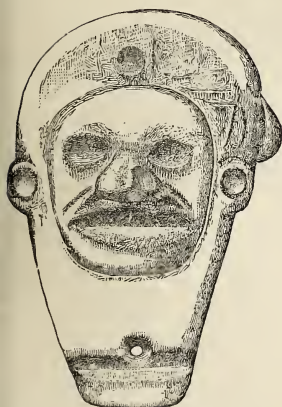


FIG. 58.—Supposed boss and panel of a slender collar. $\frac{1}{4}$.

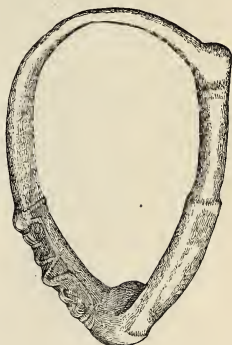


FIG. 59.—A left-shouldered slender collar, showing the shoulder-swelling, the boss, and the panel-border. $\frac{1}{6}$.

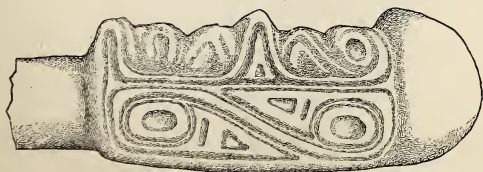


FIG. 60.—Right panel and scrolled border of a left-shouldered slender collar. $\frac{1}{4}$.

shoulder-ridge encircles the stone. The left panel has the marginal prominences and the oval depression. The right panel is ornamented with lozenges and triangles surrounding a circular depression in the center. The boss and the transverse panel-ridges encircle the collar.

17082. (Fig. 59.) The shoulder is well set off from the stone, and is subtended by a very shallow ridge. The left panel has the marginal prominences and oval depression. The right panel is inclosed in a ridge looped at the upper anterior corner, which is continued to form a part of the panel marginal scroll. The panel is ornamented with a dotted circle at each end, inclosed in a sigmoid ridge, the ends of which expand gracefully to fill the triangular spaces between the sigmoid, the circles, and the border-ridge of the panel. (Fig. 60.) The boss is ridged up on the inside.

17083. The shoulder is bell-shaped, having its transverse ridge nearly encircling. The left panel has the prominences and oval depression. There is no right panel. The lower end of the specimen is roughly pecked.

17084. The shoulder is not very prominent and is continuous with the transverse ridge. The left panel with its prominences very plainly executed. The right panel is a smooth space inclosed in a ridge which runs into the boss at the lower corners.

17086. The shoulder well rounded out and winged on the margins, the shoulder-ridge abutting on the shoulder and encircling the stone. The left panel has the prominences and a small oval depression. The right panel is inclosed in a double ridge and furrow, and ornamented with chevrons and parallel included lines. The panel-border is an elaborate double scroll, with triglyphs in the center of each.

17094. The shoulder slight and flattened, and abutting on the shoulder-ridge. The left panel has the prominences and a slight oval depression. The right panel is a looped ridge ornamented with lozenges and triangles. The panel-border is a double scroll with small triglyphs. The boss is ridged on the inside.

17095. The shoulder is bell-shaped, and subtended by a wide and encircling shoulder-ridge. The left panel has the prominences, and an oval chamfer in the center. The right panel included in a looped and perforated ridge is plain in the center. The panel-border is an elaborate double scroll. The transverse panel-ridges and boss encircle the stone, and the furrows of the panels are repeated on the inside of the collar. A truly unique and beautiful specimen.

17096. The shoulder is very slight, and has its transverse ridge encircling. The left panel has the prominences and oval depression. The right panel is an unornamented surface inclosed in a double ridge and furrow. The transverse panel-ridges and boss encircle the stone.

17098. The shoulder is slight and much flattened, and is subtended by a narrow shoulder-ridge. The left panel has the marginal prominences and a chamfered interior space. The right panel is wanting and the boss small. This is a very rude specimen.

17099. (1.) A fragment of a collar. The left panel is present and has the marginal prominences and a smooth interior surface. A short portion of the right panel remaining indicates a plain surface inclosed in a ridge looped on the upper anterior corner.

17099. (2.) A fragment of a collar, consisting of a boss and a left panel the latter with the prominences and a deep oval depression.

17106. The shoulder is bell-shaped, with cup-cuttings on its sides. The shoulder-ridge is extended upward along the margins of the shoulder on either side, and thence quite around to the upper transverse ridge of the right panel. The left panel has the prominences, and its interior space smooth. The right panel is smooth and inclosed in a ridge looped at the upper anterior corner. The panel-border is a double scroll fretted on the sides with cup-cuttings in the volutes. This is somewhat transitional in form between the massive and the slender.

Dimensions of the collars in inches.

Number.	External length.	External width.	Thickness at the top.	Thickness at the right.	Thickness at the left.	Thickness at the bottom.	Depth at the top.	Depth at the bottom.
17104.	17.5	14	2.15	2.2	2.1	2.3	4	4
17107.	17.5	14	2.3	3.15	2.5	2.55	4	4
17108.	17	13	2.45	2.45	2.45	2.3	3.8	3.8
17109.	18	14.5	2.8	3.1	2.7	3.3	5	5
17105.	17.75	15	1.7	1.7	2.2	2.9	4	4
8029.	18.1	11.4	1.4	1.4	1.35	3.3	1.75	3.6
8030.	17.5	12	1.35	1.5	1.4	2.95	1.5	3.1
17080.	13	11	1.25	1.55	1.25	3.25	1.7	3.7
17085.	18	12.5	1.15	2.1	1.35	3.55	1.9	3.5
17087.	17.5	13	1.45	1.9	1.45	3.45	2	3.1
17088.	16.8	11.1	1.25	1.55	1.45	3.8	1.8	3.75
17089.	16	11.2	1.4	1.45	1.4	2.45	1.6	2.9
17091.	17	11.5	1.3	1.55	1.3	2.9	1.7	3.5
17092.	18.7	12.2	1.45	1.55	1.5	3.1	2	4.05
17097.	15.9	11.6	1.35	1.45	1.45	2.05	1.7	2.65
17099(3).						3.55		3.8
8028.	18.4	12.3	1.4	1.4	1.5	3.6	1.65	3.15
8030.	17.6	11.5	1.2	1.35	1.5	3.5	1.65	3.3
17026.						4.25		3.8
17081.	17	12	1.4	1.5	1.5	2.9	1.8	2.9
17382.	17.2	11	1.5	1.25	1.35	2.85	1.95	3.25
17083.	17	11	1.2	1.3	1.35	2.9	1.7	3.2
17084.	16.4	11.4	1.1	1.3	1.65	2.85	1.6	3.2
17086.	17.5	11.7	1.25	1.2	1.7	3.2	1.7	3.3
17094.	15.9	10.7	1.2	1.25	1.35	2.85	1.7	3.5
17095.	17.95	12	1.4	1.45	1.6	3.8	1.8	4
17096.	16.1	10.9	1.15	1.2	1.35	3.35	1.8	3.3
17098.	17.1	11.45	1.5	1.5	1.75	2.15	2.2	2.95
17099(1).						3.45		3.15
17099(2).						2.75		3.45
17106.	18	13	1.7	1.7	2.05	2.95	3	4.5

CONCLUSION.

The objects which I have described are all from Porto Rico, and, together with a collection of interesting antiquities from other parts of the world, which do not come under my province, were bequeathed to the Smithsonian Institution by Mr. George Latimer. This generous benefactor of the Institution was of an English family who migrated to

America in 1736. His father was a merchant in Philadelphia, where his son George was born in 1803. Having often visited the West Indies as a supercargo, he became attached to the country, and, in 1828, entered the mercantile commission business in St. Thomas. He afterward removed to Saint John's, Porto Rico, where he remained until near the time of his death, which occurred in Paris August 2, 1874, from the effects of a surgical operation. He was an honored citizen, and for many years was consul-general of the United States for the island. He was, at the time of his death, consul for Holland and Austria, and had been created by the King of Spain a "Knight of the Order of Isabella." Mr. Latimer has left no written descriptions of the objects and the localities of their discovery. His nephew, Mr. W. H. Latimer, writes: "I believe he was prompted in the beginning by curiosity, but with increase of materials and knowledge of the subject came also a greatly increased interest, that spared neither pains nor expense in the augmentation of his treasures. Visiting personally any neighborhood where his labors were likely to be rewarded, and calling to his assistance many others in different parts of the island, he added constantly to a collection which he highly prized as the only one of importance existing of the aboriginalities of the island. Some of the specimens were found in caves, but the greater part were turned up by the plow and hoe, when new lands were put under cultivation, but I cannot specially localize them or say whether any were found in graves or in shell-heaps."

According to Sir John Lubbock's classification, the makers of these objects were a purely neolithic people, and, according to Mr. Morgan, they were not savages, but were in the "middle status of barbarism." In addition to the fruits of nature, they prepared maize and cassava and fermented drinks. They lived in round and square houses, with thatched roofs, grouped in small and large villages. They made pottery, the boldness and truthfulness of whose ornamentation attest their division of labor. In a warm climate very little clothing was needed, yet they spun and wove cotton cloth. Their implements of industry, so far as we have recovered them, are, I repeat, the most beautiful in the world. Their canoes, especially in Porto Rico, were exquisitely wrought, with the sides raised with canes, daubed over with bitumen, and not flat, but with a keel. (Stephens's *Herrera*, i, 340.) Their pastimes were the diversions practiced by our own Indians, consisting principally of mock fights, in which oftentimes many were wounded or killed. Their artists were prodigies in design and workmanship, as the finer forms which I have described attest. Their social life is little understood, but probably resembled in all respects that of the Florida Indians at the time of the discovery. The absence of all flaked or chipped stone implements may be accounted for in several ways. The siliceous rocks which take the finest chipping are not found here, and in many of the islands shell (*Strombus gigas*) is the only available material for any implement. Neither are the large animals here which require such hard and fine

points for their destruction, nor sharp knives and scrapers to cut them up and to tan their hides, which would be useless for clothing in this climate if they had them. In the second place, many of the woods are extremely hard, and with charring take a very fine point or edge, sufficient to pierce or cut fish, birds, or men. We are not to lay too much stress, therefore, upon the absence of rude stone implements, especially as the collections from these parts are as yet very meager. Still it is quite possible that the civilization of the Caribs and of their hereditary enemies was introduced from the mainland, and the absence of chipped and flaked tools, if further demonstrated, will be sufficient evidence of this.

As to the place of most of these objects in an anthropological museum we are sufficiently informed, but concerning the use of the masks, the mammiform stones, and the collars, we are entirely in the dark. Some of these rare objects are figured and described in *Flint-Chips*, with references to Latham, Wilson, to Cherminier and Guesde's collection from Guadeloupe at the Paris Exposition, to Schomburgk, Poey, and Cato, (*Flint-Chips*, pp. 223-240.) I have seen but cannot recall the title of an account of the Copenhagen Museum by Valdemar Schmidt, in which one or two figures are given. In *Scribner's Monthly* for August, 1875, Dr. J. B. Holder figures and describes a collection in the American Museum in Central Park, New York.

As to whether they were the work of the Caribs and of their more peaceful neighbors there may be a difference of opinion. The fact that the peculiar forms here enumerated are found throughout the ancient Carib area; that the stone seats resemble in form and ornamentation those made of wood and used by persons of distinction mentioned by the early historians of Columbus's voyages, and recently discovered by Messrs. Gabb and Frith; that the celts are like those used in Polynesia and on the northwest coast of America, where large dug-out canoes are still in use; all these lend great force to the opinion that these are Carib or Arawak implements, and not the relics of an older civilization driven out by them. However, my own mind is very far from a positive opinion on this point.

Some suggestions of possible function arise in the mind concerning these doubtful forms, when we come to handle a great number of them. The rough under-surface of the mammiform stones suggests the grinding of paint, incense, spice, or some other precious material, and the natives are said by the historians to have been fond of aromatic substances. Against this it may be urged that they are too costly for mortars; that some are hollowed underneath, some are flat, and some are convex; and that though very rough on the under side, the roughness seems to be that of an original pecking, excepting at the chin and knees of the Typhoean figure, where the stone is worn smooth. The furrows at the base of the mammæ seem to indicate the custom of lashing them to a staff as ensigns, or to dash out the brains of a victim or

an enemy. There is no mention, however, so far as I am acquainted, of the natives performing human sacrifices. This lashing theory is strengthened by the fact that on some of the masks which closely resemble the mammiform stones there are cleat-like projections, evidently to be lashed to a handle. There are no grooves worn in the furrows by a lashing that I could discover. The bulging to one side of the mammæ, some to the right, others to the left, hints at their use in pairs. Their elegance of design and variety of execution in conformity with an ideal, characterize these as the highest type of sculpture with stone implements in the world.

The collars are quite as puzzling. Their right and left shouldering, and the more exquisite finish of the panel opposite the shoulder, when the panel is present, seem to prove that they were to be used in pairs. Their gradation in ornament, the presence or absence and the form of certain conventional parts, seem to speak of distinctions of some kind. Some very interesting indications of the manner in which humanity has elaborated its culture, guided by the leading-strings of nature, are given in the course and construction of the ridges and furrows which constitute the ornaments of the panels and the marginal ornaments. There are no sharp and deep corners, but the furrows wind about in curves returning into themselves, or run out into some deeper furrow, simply because a man working with a stone tool cannot make a sharp and deep corner. Some of the designs on these panels and marginal ornaments are very ingenious, as may be seen by the patterns given in Figs. 52, 54, 56, 57, and 60. The same characteristic is noticeable in the scroll-work of the wooden tools, and in Fig. 43. Such is the form of these relics of an extinct race; but whether they were the regalia of sacrificial victims, of military heroes, of ecclesiastical worthies, or of members of some privileged caste, who marched in double file through the streets of Porto Rican villages long since decayed, will perhaps forever remain a mystery. (Stephens's *Herrera*, i, 62.)

One of the objects of this perhaps too detailed description will be accomplished, if the light thrown upon this neolithic people by the Latimer collection shall guide some future explorer among their antiquities, if haply he may be able to decipher their meaning.

THE GUESDE COLLECTION
OF
ANTIQUITIES IN POINTE-A-PITRE,
GUADELOUPE, WEST INDIES.
BY
OTIS T. MASON.

[FROM THE SMITHSONIAN REPORT FOR 1884.]

THE GUESDE COLLECTION OF ANTIQUITIES IN POINTE-À-PÎTRE, GUADELOUPE, WEST INDIES.

By OTIS T. MASON.

INTRODUCTION.

The stone implements and other objects described in these pages belong almost exclusively to the celebrated collection of M. Louis Guesde, of Pointe-à-Pître, Guadeloupe. M. Guesde is the son of M. Mathieu Guesde, whose series of Carib stone implements attracted so much attention in the Paris Exposition of 1867, and Louise Loyseau, a creole, of Guadeloupe. He was born at Hamacas, Porto Rico, in 1844, but at two years of age was brought by his parents to live at Pointe-à-Pître. From 1856 to 1867 M. Guesde pursued his studies in Paris and returned to Pointe-à-Pître as register to the minister of finance, in whose office he is at present director of the third bureau. He has inherited from his father his love for collecting the relics of the ancient Caribs, and for nearly twenty years has been assiduous in his efforts. His duties calling him to reside successively in various quarters of the island, he profited by these opportunities to carry on his researches. To his zeal as collector M. Guesde fortunately adds the skill of the artist, and he has prepared two albums of aquarelles, in natural size and color, of all the types in his museum. One of these albums is in the Trocadero Museum at Paris, the other has been kindly presented to the Smithsonian Institution at Washington. So life-like are these portraits that one has no difficulty in imagining the objects before him.

In a former publication (Smithsonian Annual Report for 1876, pp. 372-393) a very large collection of somewhat similar objects, gathered by Mr. George Latimer in Porto Rico, was described and some reflections indulged in respecting those who made them. Since that paper appeared, Mr. E. F. im Thurn, of Georgetown, British Guiana, has given great attention to this subject, and is the author of several illustrated articles respecting the stone implements of the ancient Caribs. Without entering into a discussion upon this subject, and taking for granted that the Indians of the "discovery" were sufficiently advanced in culture to produce such works of art, we may better improve the present opportunity by instituting comparisons with well-known peoples.

If we would look for the evidence of the reappearance of similar forms and customs in regions wide apart, we must search out those portions of the earth that present the same general features, the same natural materials, and the same external suggestions or motives. While the similarities in art products which point to consanguinity of their makers often thrive in quite contrary circumstances, so outlandish frequently

as to seem like the distorted memory of a story, or little snatches of a melody sung in a distant land, those similarities which indicate the passing of a certain milestone of human progress are so nearly identical that the older anthropologists were wont to believe that like effects sprung from the same rather than from like causes.

Fortunately, there are two regions where the ground has not been so denuded as to prevent our knowing a great deal about the primitive inhabitants; where, also, the natural environment is so similar to that of the West Indies as to lead us to anticipate even the discoverers of their relics. These two areas are Oceanica and the Northwest coast of America from Sitka to Vancouver Island. In the first-named area we must include the Papuan, the Malay, and the Polynesian; in the second, the Thlinkit, Haida, Chimsian, Kwakiutl, Nutka, and Selish stocks. We might also include the tribes of British Guiana and Venezuela, which have been so exhaustively described by Schomburgh and im Thurn.*

In all these regions we have: (1) Proximity to the sea, abounding in edible marine animals; (2) abundance of the finest timber in the world for savages to work upon; (3) lack of flint and plenty of volcanic and metamorphic rocks susceptible of the highest polish; (4) almost entire absence of clay or of some of the other natural resources for the manufacture of fire-proof vessels.

In the descriptions which follow, frequent allusions will be made to similar shapes in order to guess at the functions of M. Guesde's specimens.

The editor of this monograph sincerely regrets that he has not the specimens before him; but it was impossible to transport with safety so many valuable objects to Washington, and equally impossible for the editor to make the journey to Guadeloupe. Fortunately, M. Guesde has painted in water-colors, with scrupulous care, all of the examples figured, preserving both the color and the size. The omission of the thickness would somewhat mar the description in many cases, were we not familiar with the two typical forms of blades so frequently figured here.

A few objects not belonging to M. Guesde's cabinet will be introduced to throw light upon his figures and to supply omissions in West Indian archæology.

The classification adopted here is for convenience of comparison, and it may be that things with different function will be found side by side.

The nomenclature of the parts of stone implements is taken from John Evans' classic work, "Ancient Stone Implements of Great Britain." An ax when completed consists of haft and blade. The parts of the blade are the head or butt; the neck, or groove; the body, having sides, faces, and edge. When the hafting excavation is not encircling we may have either lateral notches or facial grooves.

* Among the Indians of Guiana, being sketches chiefly anthropologic, from the interior of British Guiana. By Everard F. im Thurn, M. A. Oxon. With 53 illustrations. London: Kegan, Paul & Co., 1883. 445, pp., 8vo.

The editor cannot conclude this introduction without paying the highest tribute of praise to M. Guesde, who has, at great cost, brought together so many wonderful specimens of ancient Carib art.

As a guide to the understanding of the true size of the specimens by the drawings, a line is placed by the side of each picture, and upon these lines true inches on the specimens are indicated by dots. This plan is resorted to because by photographic reductions exact proportions are not always observed. Whatever reduction the camera makes upon the drawing it will also make on the accompanying line, and the inch spaces will be reduced accordingly.

M. Guesde gives the following bit of personal history concerning these antiquities (pp. 53-60):

From my youth I have always been deeply impressed with what I have read about the Caribs. The sight of the stone objects which once belonged to these primitive inhabitants of the Antilles produced an indescribable impression on me.

As years went by the stronger became my desire to collect together all that the soil of Gadeloupe might contain relating to the Caribs.

I accordingly went to work in the year 1866, and after eighteen years of constant research, never allowing myself to be discouraged by any difficulty, I have the satisfaction of being able to exhibit to ethnologists this collection, which I believe to be more complete than all others now existing, in Paris as well as in America.

My collection includes roughly-worked stones indicating an industry in its infancy; and others, on the contrary, which are brought to such a degree of perfection that it would be difficult to improve on them, either in design or workmanship.

It is necessary to state the fact which permitted John Lubbock to class the aboriginal inhabitants of the American islands among the neolithic peoples; it is because the stone is always polished. There is not a single relic formed solely by being chipped, for those rare pieces (axes or chisels) which present such an appearance also have the surface very well polished. Besides, these volcanic stones cannot be worked by chipping, like flint, quartz, or obsidian.

We come across axes so small that we ask ourselves if they were not used by pygmies, and these alongside of others so large and heavy that we dream of Titans, and no longer of men like ourselves.

In addition to all these relics, which I have gathered from the ground in all parts of the colony, both on the sea-shore and in the interior, and at altitudes of from 200 to 900 meters, enormous stones covered with strange designs are found, especially in a single quarter of Guadeloupe proper. The dimensions of these stones vary considerably. In some the drawings are so high up that it is difficult to reach them; in others they are near the ground or buried under the surface. They are scattered without order about the country and in the beds of the rivers. At St. Vincent, also, the last refuge of the Caribs, stones with inscriptions on them are found in the beds of rivers.

It is now very difficult to find wrought stones in the ground. Here and there the plow or the hoe turns up some occasional fragments. These stones lie in fact in the arable layer or stratum, and this has been so well worked that everything it contained has been brought to light. New clearings alone would favor the collector. In the deep strata would other things belonging to an earlier race be found? In the case of Grande-Terre it would be impossible, for as soon as we have passed the vegetable mold we reach calcareous rocks, Madreporic formations containing numerous fossil shells and dog-fish, which preclude all idea of the presence of man. It appears to me more probable in the case of Guadeloupe, which is of more ancient formation, and which must at all times have offered more resources to man.

However large may be the number and variety of the types which I possess, I still consider my work incomplete.

It constitutes only the prolegomena of what I would wish to accomplish.

In the presence of this collection, one is led to ask if these wrought stones are the work of the *Yguiris* or of the Caribs, or if they would not belong to these two races. We are in almost complete darkness on this point. It is necessary to throw some light on the subject. This could be done only by visiting all the Lesser Antilles, which were already occupied by the Caribs on the arrival of Columbus; the Greater Antilles, from Porto Rico to Cuba; and Trinidad, which is but a fragment recently detached from the continent; by gathering carefully in each island all the wrought stones which would certainly be found there; by studying with the utmost care the inscribed stones; by classifying separately the inscriptions and relics according to locality, and finally by comparing the whole together in order to determine the points of relationship.

Having completed this first labor in the Greater and Lesser Antilles, it would be necessary to collect together the relics from the soil of Guiana, and, taking them as types, to compare them with those of each Antille separately. Then only could we come to some conclusion. We would have laid open to us, in fact, the now silent history of these aboriginal inhabitants.

I have been able to obtain some pieces from Porto Rico, as follows: 1st. Celts of all sizes, in general well polished, but some with a fine brilliant glazing. 2d. A mortar representing a bat—a very curious piece which must have required long months of labor. 3d. An idol representing a man lying on his belly, and supporting a mountain on his back. A very remarkable peculiarity is that the legs are bent as if in the act of swimming. I think that this idol is the personification of some marine deity, protector of an island. 4th. An enormous necklace, covered with inscriptions on one of its lower surfaces. This necklace was evidently slung over the shoulder like a hunting-horn. 5th. The lower part of another necklace, but without any inscription. 6th. A small netting-needle. 7th. Some remains of pottery (heads of

men and monkeys modeled with great boldness, evidently forming cup-handles) and the upper rim of a cup which must have been of great diameter. Some of these fragments of pottery still bear traces of a fine red glazing.

I must acknowledge that during two sojourns at Porto Rico—one of six and the other of two months—I never came across an ax. Moreover there is not a single ax in the superb collection presented to the museum at Washington by Mr. G. Latimer, and which is entirely from Porto Rico. The abundance of axes in the Lesser Antilles and their complete absence in Porto Rico would seem to indicate a difference of race in the inhabitants of these different islands.

I have been able to obtain five perfect celts and four fragments from Martinique, one single celt—but very remarkable for form and polish—from Dominica, two celts and three axes from St. Lucia, and one celt from Santo Domingo (the Hispaniola of Columbus).

No typical difference can be established between the celts, whether they come from Porto Rico or from Martinique, Guadeloupe, Dominica, and St. Lucia.

Now, since the strata of the Lesser Antilles do not contain the material used in some of these celts, it is certain that they were not made where they were found. Should we not, therefore, infer from this that they all have the same origin, that they all come from the continent or from the Greater Antilles?

I have in my possession a club (*baton*) from the Galibis of Dutch Guiana. This club has a certain age. The wood, of a red color when freshly cut, has assumed a very deep black hue; the cotton thread around the handle is very dirty. The weapon has seen service. This club is exactly like those used by the Caribs of the islands, and which Father Dutertre has described, but the peculiar part of it, the thing that gives it an enormous interest, is the green celt fixed in its lower extremity. Now, this celt resembles all those which I have found in Guadeloupe and the other islands. Is it of modern manufacture? Is it not rather the work of the first inhabitants of the continent? Has it not been found in the soil and used by its discoverer? I would decide without hesitation in favor of the latter hypothesis, for it is covered with a patina which only a long continuance in the soil could give it.

Here is another fact which seems to prove that the Caribs of Columbus and of Father Dutertre are the same as those of Guiana.

The exterior distinguishing color is not always that of the stone of which they are made. The color, which is black, red, yellow, brown, or bluish, partakes essentially of that of the soil from which they were taken. Those from Grande-Terre, whose calcareous soil is covered with a thin layer of black and compact vegetable earth, all have the colors more or less dark—brown, red, black—while those from Guadeloupe proper, whose soil is covered with a thick layer of more or less ferruginous red earth, have the tints lighter. Yellow specimens are numerous there. Many of them have preserved their normal tint. These

are the ones found near rivers. Continually washed by their waters, they have not acquired the coating of rust with which those buried in the ground are covered.

So true is the above that every fresh break shows the interior of the stone to be of a different color from the exterior.

All these rocks are volcanic, and are naturally either black, blue, or green.

This peculiarity does not generally exist in polished celts. The glazing has unalterably fixed the color of the stone. They have, in consequence, remained free from all oxidation, and appear as if just from the hands of the workman.

Axes.—Axes are more numerous than all the other pieces. That may be easily understood, the ax being of prime utility to man. Some are long and narrow, others short and wide. Some are very flat, others very thick. Some are very small, while others are of enormous size and weight. I have two weighing, respectively, 4 kilograms, 750 grams, and 4 kilograms, 775 grams. Some are of very simple construction, merely the natural stone of appropriate form, which a little working transformed into an instrument; while others, on the contrary, are true masterpieces, which will bear comparison with those found in Denmark only. The latter are very rare. They were evidently used for purposes of parade, for it cannot be allowed that the author of such a work would have exposed it to be broken at the first shock, thus losing the product of the labor of several months, I might even say of several years.

The ax admits of four distinct parts—the head, the neck, the blade, the cutting edge.

The head is sometimes round, sometimes flat, sometimes very small, sometimes as large as the blade. Some axes have one or several transverse grooves, some have none at all, others a single longitudinal groove. The last are very rare. Pierced axes are very rare. The holes served, if they offer any assistance, to fasten the stone to the handle; if not, to suspend ornaments. The head played an important part in attaching the ax to the handle, for there can be no doubt that all these axes had handles. The small as well as the large ones were fixed on a wooden handle by means of cords made of cotton or mohot.

The neck is more or less lengthened. Sometimes it is formed by lateral notches only, but generally by a circular depression.

The blade varies considerably in form, length, and thickness. There is no proportion between it and the other two parts.

The edge is more or less distinct. In some axes it is so perfect that one would think they had been sharpened the day before.

I have three double-edged axes—two of moderate size, the other very small. I have four axes of which the head is prolonged into a long tail, and which resemble (one of them especially) that which has been termed Montezuma's ax. I have also a certain number, both small and very large, with a slight but decided protuberance on the lower part of

one side of the cutting edge, which suggests the idea of a tool appropriated to some special purpose. Finally, I have some axes with the blade curved like that of a cimeter. These are rare.

Celts.—Celts vary much in form, size, and color. Some are slender with a sharp point, others are massive with a blunt point; some are broad and flat, others narrow and deep; some reach enormous proportions, while others are very much reduced in size.

Celts are scarcer than axes in Guadeloupe. Most of them are made of a handsomer, harder material than that used for axes, such as serpentine, jade, or jadite. The fine glazing of the stone, also, is found only in celts. I have some, large and small, made of the volcanic stone used ordinarily for axes. These are very well polished, but not glazed. This handsome glazing gives an exalted idea of the industry of these savages, for it could not be done better in our days.

The Caribs made use of the living forces of nature to fix the celts on the wood. But to introduce a celt into a young tree and let the tree grow till the resistance was sufficient, required many years. I believe, therefore, that they rarely had recourse to this process. They evidently followed the same method employed by the Canaques and other savages of the present century ignorant of the use of metals, whose celts do not differ from those found in our islands. This method consisted in fixing the stone by the aid of very fine cords in a socket prepared in the wooden handle.

I must not forget to mention the shell celts. These are not made of living shell, which would not have been hard enough for the purpose, but of fossil shell. They are very rare. They were extracted from the outer edge of the *Strombus gigas*, very common in the Caribbean Sea.

It is to be supposed that the glazed celts were rather warlike weapons than instruments of labor, for they offer more resistance in proportion to their size, and we know besides that the savages used in war whatever had most value in their eyes. The very large-sized celts must have served as wedges in splitting trunks of trees.

Casse-têtes.—The casse-tête type is furnished by a stone, either round or with bilateral facets, in the center of which is a more or less deep groove for the wooden handle. One can easily conceive the power of such a weapon wielded by a muscular arm in hand-to-hand combat.

Some are more perfect in form than others. Every one was free to fashion so important a weapon as best suited him.

But what astonishes the observer is the small size of one of these relics. Evidently it could have been only an amulet, worn with the idea of preserving its owner from the blows of the weapon it represented.

Other casse-têtes were used without handles. Only two types figure in my collection. This weapon had not the value of the preceding.

Pestles, grinders.—Pestles and grinders are of various forms and sizes. My collection includes a certain number of them. I possess a single specimen, which was used with both hands.

Mortars.—Mortars are not very numerous. This is explained by the fact that any hard stone which was flat and smooth would take their place. The complete mortar could have been only an article of luxury belonging to a cacique.

Shall I designate as mortar that rounded concave stone with regular grooves descending from the central point to the rim? Although quite hollow on its lower surface, I do not think it could have been anything but the lid of a large vase, grooved or fluted in like manner. In fact this mortar would have had no fixed position. It could not remain stationary in the position necessary to make use of it. Or should we not rather think that the maker of this piece wished to represent a mili-form cactus so common in the Antilles? And in this case should we not rather class it among the idols? (Fig. 172.)

Dishes.—There are but two dishes in my collection: 1st. A large one of rude workmanship. The concavity only is polished; the exterior rough and very irregular. 2d. A small one of very remarkable finish. It is in fact very well polished on all its inner and outer surfaces.

Harpoon.—One single harpoon, slightly broken at the three extremities. The absent parts can, however, easily be restored in following the lines traced on the body of the piece. This instrument is very remarkable.

Hooks.—I have two hooks very different in form. Both are a little broken, but easy to reconstruct by following the method indicated above.

Awls.—Awls are rare. My collection includes only two of them, but I must state that the material employed is harder than that of the ordinary tools and instruments.

Chisels.—Chisels are numerous and of various forms and sizes. The basil of the cutting-edge is perfect. Some of them are made of the same material used in the fine celts, and, like the latter, have the handsome glazing mentioned above.

Vases.—I have only two vases. One is of guaiacum. The handle is perfectly isolated from the body of the vase. This piece is of very great interest. As the guaiacum is incorruptible, we need not be surprised that it has come down to us. It was found at Bertram Creek, the last quarter of Guadeloupe inhabited by the Caribs. Its edges are worn and hacked, and bear evidence of having been a long time in the earth. I have seen a small tortoise of the same wood found in a cave at St. Vincent.

The other in my possession is of stone. It is an astonishing piece from its general regularity and its contour.

Shall I class among the vases that small cup with a rather long spout? It rather resembles a spoon, and I think that it might be designated as such, taking into consideration the break, which leads us to suppose that a prolongation forming a handle formerly existed.

Netting-needles.—There is one small netting-needle, very well made and very regular, which evidently served to net cotton, and two other larger, more massive ones, which served to prepare cords.

Idols.—The idols are six in number.

1st. One representing a man extended on his back, the legs bent under him, the arms applied to the chest, the head covered with a cap, the sexual organs very conspicuous. It is well finished and must have cost years of diligent labor. (Fig. 200).

2d. One representing a man on one face and a monkey on the other, is very interesting (Fig. 210). It was found at Matouba. The work on this statuette is rude. The hand that made it was wanting in skill. But what shall we say of the genius which inspired this combination of man and monkey? Should we not consider Darwin only a plagiarist?

3d. Another found in Guadeloupe, of the same type as that from Porto Rico, but much larger and so rough that it cannot be determined what it represents. The under surface is slightly concave.

4th. A small granite pyramid, with three grooves or furrows on its lower part. It was found on the island of Désirade.

5th. A head with two faces surmounted by a Phrygian cap. This head was to be fixed on another stone or a piece of wood forming the body of the idol, for it is much too heavy to admit of the supposition that it was carried in the hand. I have vainly searched for this complementary lower portion at the place where I found the head.

With this last idol we must place an ax and one other piece, both having lines identical with those of the idol head. I think they represent faces.

Amulets.—The principal amulet is of carbonate of lime in bladed crystallization. It represents a *maboya* (evil spirit) with bended arms and legs, and the virile organ in a state of action. The shoulders are pierced posteriorly to allow of the suspension of the amulet. The other amulets are medallions of different sizes, more or less round, all pierced with a small hole to admit of suspension. I have a single small crescent of stone, an evident representation of the caracoli of metal. This crescent must have been set in wood, unless it was provided with a cotton string terminating at each extremity in a small cord for suspension.

Disks or quoits.—I have six disks, large and small. One especially is a very remarkable piece of work. There is no doubt about the determination of these relics. The Caribs played quoits.

Edicule.—A small monument having handles on each side, on top of the handles a platform disappearing under a vault. There is a hole in the middle, presumably the place for an idol. This relic is very curious, and reminds one of the Mexican teocalli. (Fig. 194).

Chisels of shell.—Besides the various stone tools, my collection includes a series of very fine chisels extracted from the outer edge of the

Strombus gigas. This part of the shell is very thick and harder than stone. It is certain that the Caribs did not use the living *Strombus*, but were careful to take the fossil *Strombi*, which had in time acquired the hardness of ivory.

Stone for making axes.—I have in my possession a very interesting stone, which has inscribed on it the use for which it was intended. It has concavities on three of its surfaces. It is evidently a kind of grind-stone, on which stones were rubbed in order to shape them.

Since writing the above, I have had the good fortune to discover in Grande-terre, in a piece of ground which had not been plowed for 60 or 80 years, two tools of flaked flint—a knife and hacking-knife. This discovery somewhat modifies the theory held to this day by writers on America that *flaked flint* does not exist in the Antilles.

It is very evident however that these two flints were not dug from the soil of the island and then flaked by their possessor, for this stone does not exist in Grande-terre or Guadeloupe in a state of nature.

These two *flaked flints* establish, in an irrefutable manner, the fact of a migration of men from the valleys of the Orinoco towards the islands.

I. UNPOLISHED IMPLEMENTS.

These do not form a class apart, but they are exceedingly useful as showing the method of blocking out the more elaborate implements, when nature has not supplied a polished pebble sufficiently near to the desired pattern. The three methods of chipping, picking, and grinding are all outlined in this group (Figs. 1–8).

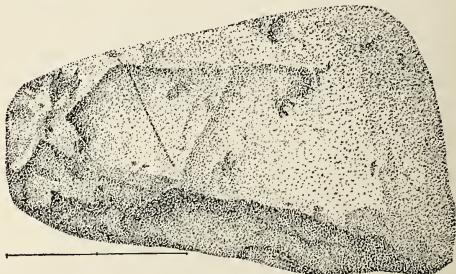


FIG. 1.

Fig. 1. An unsymmetrical, rude blade, of mottled brown and gray color. The surfaces are nearly as they were left by the removal of great spalls; but the edge is ground, and has that peculiar slope belonging to old axes battered on the corner away from the workman. There is as yet no indication of groove or haft notches, and, therefore, if the

specimen was used with a handle, the blade must have been inserted or lashed (see Fig. 14).

Length, $4\frac{8}{10}$ inches; greatest width, 3 inches.

Fig. 2. A rudely-chipped blade of black color. The outline is bell-shaped, and with sufficient grinding and polishing would resemble some of the more beautiful objects in the collection (see Fig. 65 and others).

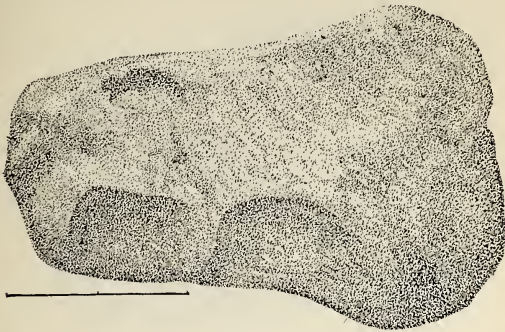


FIG. 2.

The implement has already a pleasing outline, and the form re-appears in Costa Rica and Chiriqui, where great numbers of celts of this shape, but smaller, were recovered.

Length, $5\frac{4}{10}$ inches; width, $3\frac{5}{10}$ inches.

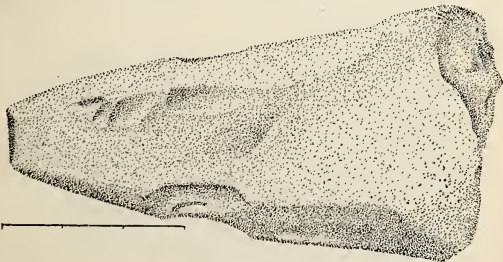


FIG. 3.

Fig. 3. A chipped blade of very light brown surface, subtriangular in outline. Much of the surface is untouched, and there is just enough of lateral notching, &c., to show that the great variety of form in such implements after they are finished is partly due to nature and partly to the workman's desire to produce a certain kind of implement. It is

very much like our handwriting; we try to imitate certain copies, but we only preserve the type while we stamp our own individualities upon them. All sorts of pebbles lie at the hand of the savage mechanic, none of them just what he wants. He selects the best and finds a new type for the learned archæologists. A collection of pebbles from the West Indies would be very instructive in showing just how far nature had been the draughtsman and the teacher of the aboriginal artisan. This implement, though rude, shows much use, and rather hints that fine polish is evidence of age and much use in many cases.

Length, $5\frac{4}{10}$ inches; greatest width, $3\frac{5}{10}$ inches.



FIG. 4.

Fig. 4. A coarsely-chipped blade of purplish-brown surface. The spalls have been taken off with great boldness from the faces and the groove. The specimen is so broken at the edge as to make it uncertain whether it has been used at all.

Length, $7\frac{3}{10}$ inches; width, 4 inches.



FIG. 5.

Fig. 5. A chipped blade of beautiful orange-brown surface, which has been much modified by grinding. In type it belongs to a low order of axes, having only lateral notches. On the faces are very slight haft

cavities, showing plainly the pecking. Flint implements with smooth edges and partially ground sides are quite numerous in European collections, leading to the conviction that polished celts are of two kinds, those polished at once and those polished by years of grinding.

Length, $7\frac{1}{2}$ inches; width, $4\frac{1}{10}$ inches.



FIG. 6.

Fig. 6. A chipped blade of slate-brown color. The shape is that of the typical hoe, the sides being rather incurved than decidedly notched. The surfaces are much worn and the edge ground away unevenly, furnishing another example similar to those of England and the Continent, above noticed, made of flint. It is in many cases difficult to decide how much the change of surface is due to use and how much is due to weathering.

Length, $7\frac{3}{10}$ inches; width, $4\frac{3}{10}$ inches.

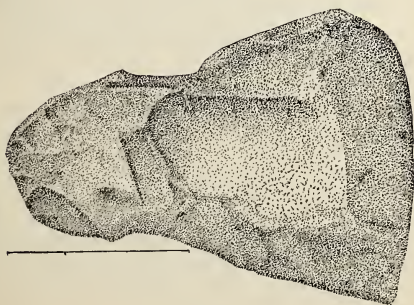


FIG. 7.

Fig. 7. A chipped blade of light-brown color. The form decidedly resembles that of the chipped hoe occurring in many parts of the United

States. By this it is not meant that the maker of the implement was an agriculturist. There are slight indentations at the sides for hafting, and the edge is slightly worn off on what we may be allowed to call the outside.

Length, $6\frac{8}{10}$ inches; width, $4\frac{8}{10}$ inches.

Fig. 8. A chipped blade of brown color on the weathered portions. There can be no question, from the general outline of this rude specimen that we have here blocked out, what was designed to be a finished



FIG. 8.

blade with small butt (Figs. 193, 191). The edge chippings exhibiting the natural black color of the stone, seem to be much more recent than the rest, and may have resulted from accidental breakage.

Length, 6 inches; greatest width, $3\frac{2}{10}$.

II. POLISHED BLADES WITHOUT HAFT-GROOVES.

The typical "celt" of the West Indies is the almond-shaped variety, called "petaloid" by Mr. im Thurn, so distinctly recognizable that John Evans receives an alleged Scottish specimen of the same shape with suspicion. But this petaloid or almond variety runs into other forms, notably what we might call the Papuan type. The petaloid type was doubtless inserted or "perserted"; but the flatter Papuan form was always inserted, and served with sennit or other twine. The hafts also were of different shapes; that of the former was straight, that of the latter lambdoidal. In certain portions of the Antilles the greatest abundance of shell chisels are found, and it would not be marvelous to discover in stone implements a close resemblance to some of these.

When we remember that we are speaking of a maritime people who had the greatest abundance of ship timber at hand and leisure to work it, and that they had the very best volcanic rocks to convert into implements, we have only to turn either to New Guinea or Queen Charlotte

Islands to reconstruct in part the lost social fabric of those who used M. Guesde's stone adze blades.

The Caribs had two kinds of boats—a very large canonia and a small couliala, both dug out of a single trunk. The former attained a length of 40 feet and were 7 or 8 feet wide. They could carry fifty persons with arms and baggage, and were worked with oars and sails. The coulialas were not more than 20 feet long and 3 or 4 wide; they were propelled with paddles. The Indians of the Northwest Coast have the same distinction of dug-outs. In the National Museum at Washington may be seen both the immense family boat, over 60 feet long, and the smaller, more shapely whaleboat, about 12 feet long, from the same people, carved from the *Thuja gigantea*.



FIG. 9.

Fig. 9. A celt or blade of the simplest form, and dark brown in color. In this specimen we have an example of economy in working. Just as the ancient flint-workers of France began their celts by grind-

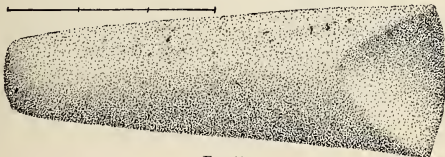


FIG. 10.

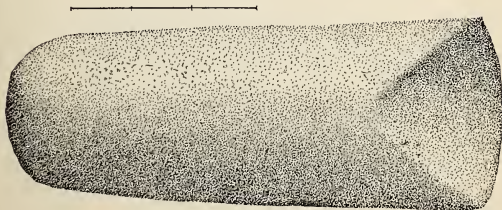


FIG. 11.

ing down the edge of a chipped core; so the ancient West Indian levied upon Nature for all the work he could extort from her, and was more fortunate than his brethren of France, for Nature did his polishing for

him. There would seem to be two edges to this specimen, but the smaller one is a little modified from the natural shape.

Length, $7\frac{1}{2}$ inches; width, 2 inches.

Figs. 10 and 11. Two blades or celts of brown surface and highly polished. These objects should certainly be called chisels if any are to receive that name. Figure 10 has sloping sides, while in Fig. 11 they are almost parallel. The outline of each is perfectly symmetrical and the edges so neatly bevelled as almost to create a suspicion of their savage origin. These specimens would be considered unique in any area of lithic culture, and certainly the West Indies have produced no others similar. (See *Timehri* I, p. 265, 1-7.)

Length of 10, $6\frac{6}{10}$ inches; of 11, $5\frac{4}{10}$ inches.

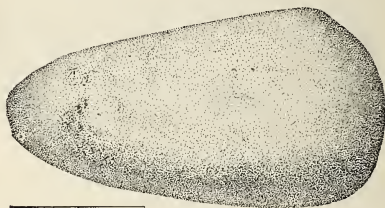


FIG. 12.

Fig. 12. Polished blade from New Caledonia. The material is of a clear green color resembling jade. Professor Baird has given the name jadoid to this whole class of minerals so well known to archæologists. This shape is well known throughout the Papuan area, most of the blades being mounted in curiously-wrought lambdoidal handles, very thin and wide above and at the blade. The wonder is how such tools could have been used with any effect (see Fig. 14).

Length, $5\frac{7}{10}$ inches; width, 3 inches.

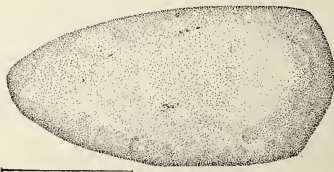


FIG. 13.

Fig. 13. Polished blade from New Caledonia, of light-mottled green color. It resembles Fig. 12 in general appearance, but the edge has been much used, indicated clearly by the battering on the outer side.

Length, $7\frac{6}{10}$ inches; width, $3\frac{8}{10}$ inches.

Fig. 14. Hafted blade from New Guinea, of dark-green colored material, probably serpentine. The lambdoidal haft and the serving are

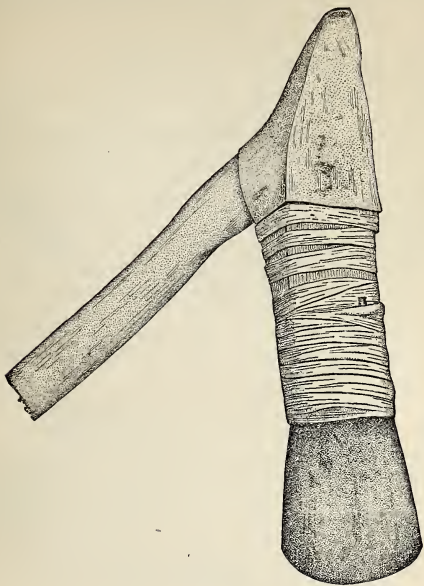


FIG. 14.

shown, but M. Guesde's figure conveys too much the idea of an adze. The plane of the blade splits the haft, is not perpendicular to the plane of the haft.

Length of shank and blade, $12\frac{1}{2}$ inches; width of blade, 3 inches.



FIG 15.

Fig. 15. A beautifully polished blade of hard, black colored material. This specimen is remarkable for its curved butt, straight sides, flattened

faces, and fine edge. The elongated hexagon in section is not uncommon in the West Indies, and occurs very frequently in Costa Rica. The bent butt of the blade is a very common feature in shell blades. Perhaps the only truth about the shape is that the savage found it so and let it stay.

Length, $4\frac{9}{10}$ inches; greatest width, $1\frac{1}{10}$ inches.

III. FACES CONTINUOUS, SIDES INCURVED OR NOTCHED.

The next type which is to be considered is that in which the faces are continuous from the edge to the opposite extremity, but the sides, near the butt, have been modified in various ways, apparently to aid in hafting. The butt, or head, also passes through a variety of modifications, almost as numerous as the proximal end of leaves. Such implements or forms have a certain number of possibilities. They may have been felling axes, hoes, adzes, battle-axes, ceremonial axes, or simply works of art. That is to say, similar objects have been found performing these functions in different parts of the world. Reverting to our typical areas we are at a loss to proceed. The Haida do not use implements of these shapes; the Mound Builders did, however, and many of this class can be duplicated in our collections.

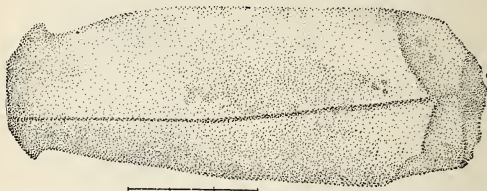


FIG. 16.

Fig. 16. A long, slender blade, of blackish-brown color. The butt is irregularly curved, and rimmed or hollowed at the notches. The hafting space is hardly to be called a notch, passing imperceptibly into the sides below. The latter are not alike and the edge has been recently broken. A natural seam mars the surface from top to bottom.

Length, $11\frac{1}{2}$ inches; greatest width, $4\frac{3}{10}$ inches.

Fig. 17. A rude blade, of very dark-colored material that has weathered to a creamy yellow on the exposed surfaces. The butt is rough and truncated. The hafting spaces have different curves and widens sharply to the sides of the specimen; the latter pass insensibly into the edge. In Mr. E. F. im Thurn's *Timehri* Plate VIII, Fig. 6, is a similar lingulate form, where the sides continue to the truncated butt, and the

little notches for hafting are only about one-fourth of an inch wide and deep, and are squarely cut in.

Length, 7 inches; greatest width, $4\frac{4}{10}$ inches; notch, 3 inches wide.

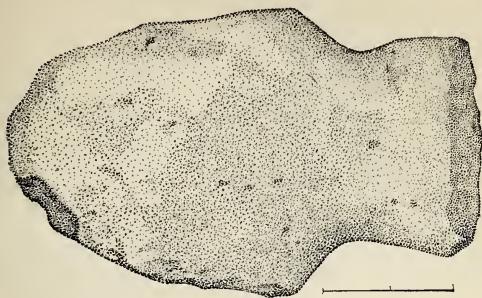


FIG. 17.



FIG. 18.

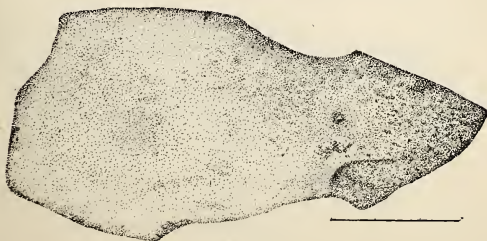


FIG. 19.

Fig. 18. A rude, massive blade of bright brown color. The butt is triangular in outline. The attachment of the handle was secured by

concavities at the sides and a very slight pecking on the faces. The edge is much broken, and large fractures on the sides, as well as the weathering, give to the implement the appearance of great age. This form is very common throughout the United States, especially in those areas where the aborigines were agriculturists.

Length, $10\frac{3}{4}$ inches; width, $6\frac{1}{2}$ inches.

Fig. 19. A massive blade of orange-brown patina. In general appearance the specimen resembles Fig. 18, but the polish is finer and the butt more acute, the unlikeness of the two lateral hafting spaces being very notable. The edge has been broken and ground again.

Length, $11\frac{1}{4}$ inches; greatest width, $5\frac{1}{2}$ inches; the edge could not have been more than 4 inches.

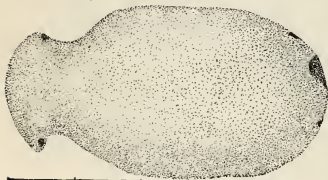


FIG. 20.

Fig. 20. An elongated ellipsoidal blade of light-brown color. The butt is gracefully rounded and rimmed or bent down over the notches like the rim of a pot. The latter notches pass insensibly into the unsymmetrical sides.

Length, 5 inches; width, $2\frac{5}{16}$ inches.



FIG. 21.

Fig. 21. An enormous blade of *café au lait* color, not only the largest in M. Guesde's collection, but no other has been reported from this area that approaches it in size. The attractiveness of the specimen is equal to its size. The butt, concavities, sides, and edge form one unbroken curve. A slight bulging on the lower side and the worn appearance

of the edge on the same side lead to the suspicion that blades of this type were made with inner and outer sides.

Length, $12\frac{1}{4}$ inches ; greatest width, $7\frac{3}{4}$ inches.

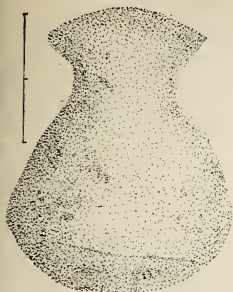


FIG. 22.

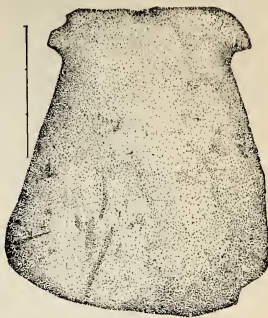


FIG. 23.

Fig. 22. A mēri shaped blade of slate-brown color. The interesting feature about the specimen is that the sides and butt are squared even more than is shown by the drawing.

Length, $4\frac{4}{10}$ inches ; width of blade, $3\frac{1}{2}$ inches.

Fig. 23. A thin, flat blade of mottled-blue and cream-colored marble. In type it is similar to several in Sir Thomas Graham Briggs' collection from St. Vincent and Antigua (*Timehri*, II, 263 ; III, 111). M. Guesde says that identical forms have been found in Dutch Guiana. Mr. im Thurn believes this form to have been used like a hoe or adze rather than as an ax. The side notches relegate the specimen to the hoe class. Especial attention is here called to the slight offset on the left of the butt and the beaked form of the right. Both of these features will



FIG. 24.

appear again in many forms much more elaborated. This specimen was found in St. Anne.

Length, $7\frac{3}{10}$ inches ; greatest width, $6\frac{2}{10}$ inches.

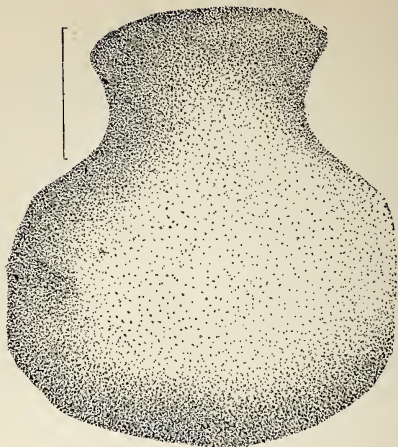


FIG. 25.

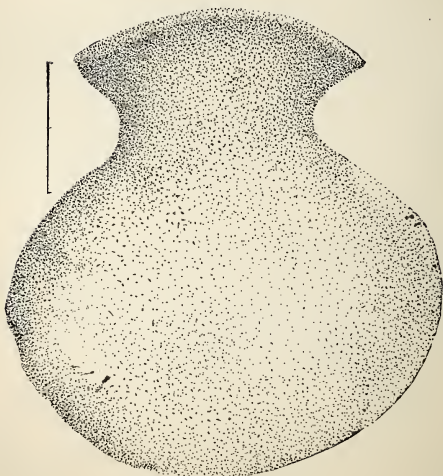


FIG. 26.

Fig. 24. A bell-shaped blade of brown patina and elongated body. It is difficult to conjecture how such a blade could be fastened in a haft. There are found in the Antilles frequently implements for smoothing, shaped like this specimen inverted. This form with the edge at the small end is unique.

Length, $5\frac{4}{10}$ inches; width of blade, $2\frac{8}{10}$ inches.

Fig. 25. A very plain blade, of light-brown color. It is rude and irregular in outline, and shows considerable age. This type, however, is well preserved, one continuous line bounding the specimen from one extremity of the butt to the other.

Length, $5\frac{3}{10}$ inches; width, $4\frac{6}{10}$ inches.

Fig. 26. A blade of very light color, but of better finish than the preceding. The butt is well curved, and the rest of the outline forms a continuous curve. It is very interesting to observe the multitude of forms in which a continuous curve bounds the implement below the butt.

Length, $5\frac{1}{2}$ inches; width, $5\frac{1}{10}$ inches.

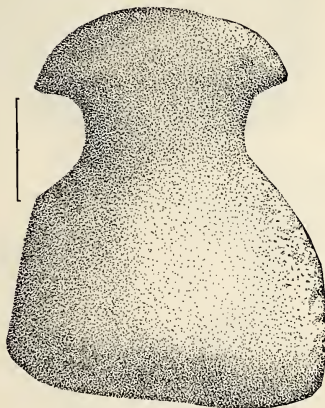


FIG. 27.

Fig. 27. A square-edged blade of very dark patina. If one were allowed to use the term ax for West Indian stone implements, this example should be called a broad-ax. The characteristic features are the convex butt, the deep antero-posterior notches, the very slight swelling over the notch on the faces, not always shown in the drawing, the dissimilar sides—the one convex, the other straight—and the squared and beveled edge. The difference of sides again points to the conclusion that these savages had begun to have a front and rear to their axes.

Length, $5\frac{9}{10}$ inches; width, $4\frac{7}{10}$ inches.

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Fig. 28. A large, broad blade, of blackish-brown color, and in contour resembling a wide-mouthed jar. At the butt the upper line is a long curve and the beaks quite slender. The lateral notches are tolerably



FIG. 28.

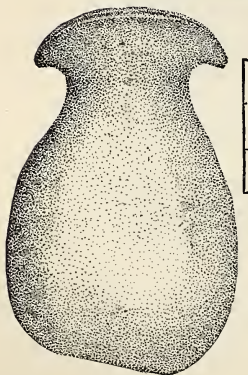


FIG. 29.

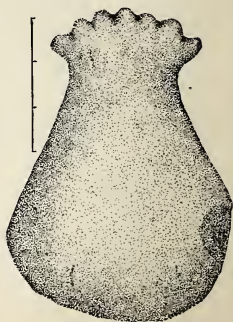


FIG. 30.

symmetrical, their lines passing gracefully into the sides. The edge is squared, but broken on the right corner and reground.

Length, $8\frac{8}{10}$ inches; width of body, $6\frac{4}{10}$ inches; of neck, 3 inches; of butt, 5 inches.

Fig. 29. A pear-shaped blade of very dark material and exquisite polish. Especial attention is called to the longitudinal groove at the butt, the length of the beaks, the unequal notches, the asymmetry of the sides, and the obliquity of the edge. From Marie-Golante.

Length, $8\frac{1}{2}$ inches; greatest width, $5\frac{3}{10}$ inches; width of neck, $2\frac{8}{10}$ inches.

Fig. 30. A broadly-spatulate blade, nearly black. It is tolerably symmetrical until the sides merge into the edge. On the upper margin are seven scallops, the same feature occurring in another type. M. Guesde thinks the scallops were useful in lashing.

Length, $7\frac{2}{10}$ inches; greatest width, $5\frac{3}{10}$ inches.

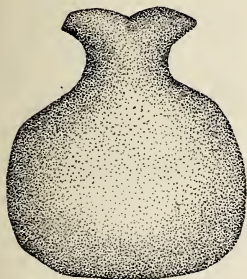


FIG. 31.

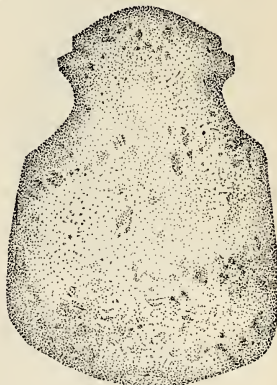


FIG. 32

Fig. 31. A hoe-shaped blade, of the double-beaked variety and light, marble color. The beaks are reduced to the simplest form and divided by an emarginate curve. The lateral notches are not separated from the other parts, their lines being continuous from beak to beak. The highly polished and finished condition of this specimen separate it from the agricultural class, although its shape is that of the plantation hoe. A similar, but clumsier, butt is seen in im Thurn's volume (Timehri III, Plate vii, Fig. 2). His blade, also, is nearly rectangular.

Width, $3\frac{6}{10}$ inches; width of neck, $1\frac{3}{10}$ inches.

Fig. 32. A massive blade of mottled yellow and brown color. The butt is very gracefully rounded and rendered beak-like by a notch or chamfer on each side. This feature of the beak and crest should be especially noticed, because it will have a higher evolution further on. The original curves of the hafting-space are unequal and terminate abruptly at the

sides, which are tolerably straight. They are also of unequal length, and the edge has the customary appearance of one sidedness.

Length, $8\frac{7}{10}$ inches ; greatest width, $6\frac{3}{10}$ inches ; shank, $3\frac{4}{10}$ inches.



FIG. 33.

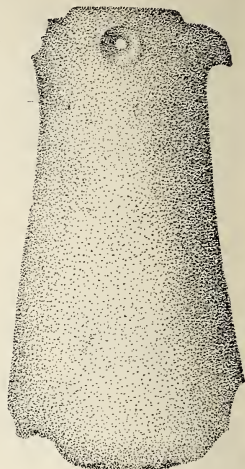


FIG. 34.

Fig. 33. A massive blade of yellowish-brown color, belonging to the two-beaked variety. The butt is narrow and deeply scalloped; possibly it was formerly mucronate at the apex and had a double countersunk perforation. The beaks are mere bosses or projections. The concavities of the haft-space are very unequal, preparing us for the type further on characterized as the bill-hook (Figs. 77-83). The edge is correspondingly modified.

Length $10\frac{2}{10}$ inches ; width $5\frac{1}{2}$ inches.

Fig. 34. A finely-polished, massive blade of dark, slate-brown color. It is of the two-beaked type, but severely plain and symmetrical. The butt is squarely truncated, and the beaks are without flutings of any kind. There is a double countersunk perforation midway between the beaks. No depressions are made for hafting, the lower part being shaped like a tunic. Mr. im Thurn (Timehri, I, 263, Fig. 1), an intermediate form between this and the next example. The crests are made distinct by a median square notch, and there is just the least attempt to produce the long, trapezoidal neck of our next figure. The most remarkable feature about im Thurn's specimen is the engraving on the face of a lozenge, having lunate figures above and on either side. Sim-

ilar implements are reported to be in the Blackmore Museum, one from Guiana.

Length, $10\frac{4}{10}$ inches; width, $5\frac{3}{10}$ inches.

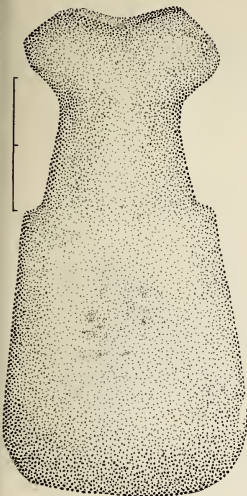


FIG. 35.

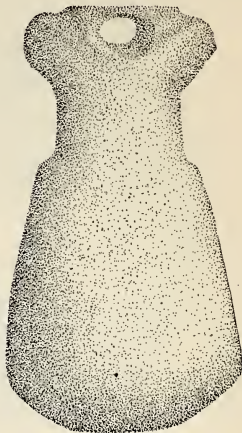


FIG. 36.

Fig. 35. A very symmetrical blade, of purplish-black patina. The butt, though very plain, belongs to the double-beaked variety, and has a long, shallow chamfer on the top. A slight swelling on the sides of the butt relegates this specimen to the rimmed class. It is retained here, however, as a connecting link to more elaborate forms. The hafting space or neck is long, tapering, and shouldered at the sides. The sides also taper outward and the edge is unsymmetrical. The surface of this example is pecked, and it is quite possible that it is a "double-eagle" blade unfinished.

Length, $7\frac{2}{10}$ inches; width of edge, $3\frac{7}{10}$ inches; of haft-space, $1\frac{8}{10}$ inches.

Fig. 36. A finely-polished blade, of brown color. The general outline is that of a shouldered hoe-blade. The edge is quite regular, the tapering sides nearly alike, the neck symmetrical, and the faces continuous nearly to the perforation. The butt is flared out at the sides like a crutch, the concave of which is occupied by a narrow, perforated ridge. With this should be compared a specimen from St. Vincent (Timehri, Vol. I, p. 264, Fig. 3). The latter is more ornamented on the upper border, but

the body falls far below that of M. Guesde's specimen. A splendid example from St. Lucia is also in the collection of Mr. Cropper. (Timehri I, 263, fig. 2.)

Length, $7\frac{2}{10}$ inches ; greatest width, 4 inches.



FIG. 37.

Fig. 37. This beautiful blade, up to whose form the last few specimens have been leading us, is of a dark-green color, and presents some interesting characteristics. The butt resembles two eagle heads facing outward. The long haft-space or neck widens gracefully outward to where it is joined to the sides by abrupt shoulders. The faces are highly polished and continuous over the entire specimen. The lower side of the edge has been broken and reground.

Length, $9\frac{4}{10}$ inches ; greatest width of blade, $4\frac{7}{10}$ inches ; greatest width of haft-space, $2\frac{7}{10}$ inches.

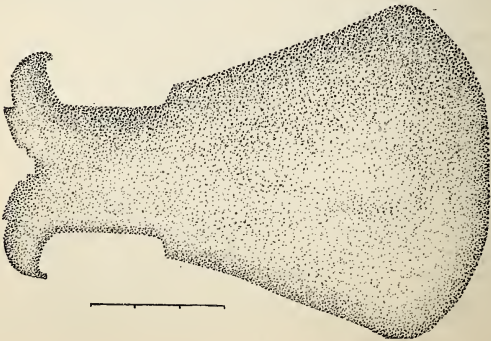


FIG. 38.

Fig. 38. A massive and graceful blade of dark sooty-brown patina. It is in perfect preservation, highly polished, and almost perfectly symmetrical. The butt has the double eagle head, the crests forming a gradined depression in the center. The haft-space or neck has nearly parallel sides, connected with the body by shoulders. The sides spread rapidly outward to meet the broad, finely curved edge.

Length, $11\frac{2}{10}$ inches; width of edge, $7\frac{3}{10}$ inches; top of blade, 4 inches; width of shank, 3 inches; width of butt, $5\frac{2}{10}$ inches.

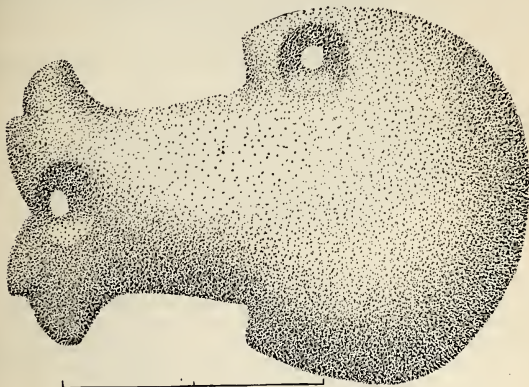


FIG. 39.

Fig. 39. An elaborate blade of deep brown color. This specimen really belongs to three of our classes. The butt is two-beaked and perforated, the beaks with long, prominent crests, (Fig. 38). There is no wide extension of these beaks, however, and the long, tapering haft-space or neck is abruptly shouldered. The body is of the meat-chopper form to be seen further on (Figs. 116-118). Its upper side has the coun-

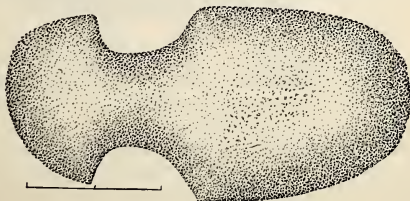


FIG. 40.

tersunk perforation to be observed on several specimens in this collection.

Length, $6\frac{2}{10}$ inches; width, $4\frac{1}{2}$ inches.

Fig. 40. A double-edged blade of rich brown color. The butt is large and irregularly rounded. The lateral notches are deep and long, giving to the object the contour of a shoe-sole. The curved sides approach each other, reducing the edge to a very narrow line. The faces, indeed, are continuous, but this is the only mark in common with its predecessors. The following examples in this section will all exhibit striking individualities.

Length, $6\frac{7}{10}$ inches; greatest width, 3 inches; width of neck, $1\frac{1}{2}$ inches.

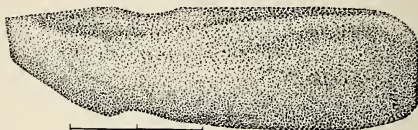


FIG. 41.

Fig. 41. A long and slender blade, of light brown color. Indeed, we have here something like a true northwest coast adze. The butt is wedge-shaped. The hafting space consists of a shallow notch on either side and a groove along one side. The faces are flattish and the sides are so inclined as to give a slight curve to the whole blade.

Length, $6\frac{8}{10}$ inches; width, $1\frac{8}{10}$ inches.

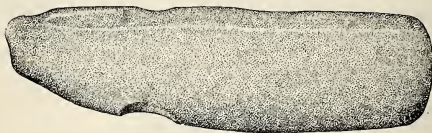


FIG. 42.

Fig. 42. A blade of reddish brown color. It is long, narrow, hollowed on one side, and slightly notched on the other. It resembles Fig. 41, but it is more graceful and brighter colored.

Length, $6\frac{3}{10}$ inches; width, $1\frac{8}{10}$ inches; notch, $1\frac{7}{10}$ inches from the top.

Fig. 43. A two-edged blade, of dark brown color. This object needs only a pierced cylindrical short axis to bring it into formal relationship with the North American ceremonial tomahawks.

Length, $2\frac{4}{10}$ inches.

Fig. 44. An unique blade, of dark brown color. This specimen is noticeable for its very long butt and short blade, the former being twice the latter. The surface is also quite rough, the result of pecking; a kind of manipulation very rare in M. Guesde's edged specimens.

Length, $3\frac{8}{10}$ inches; width of edge, $1\frac{8}{10}$ inches.

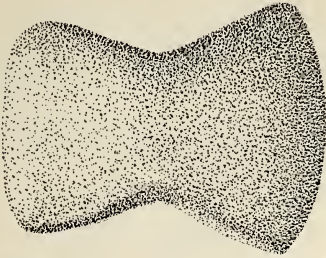


FIG. 43.

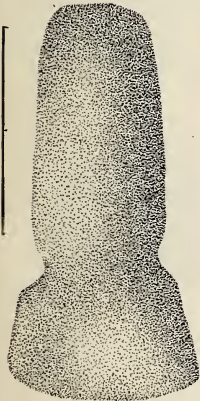


FIG. 44.

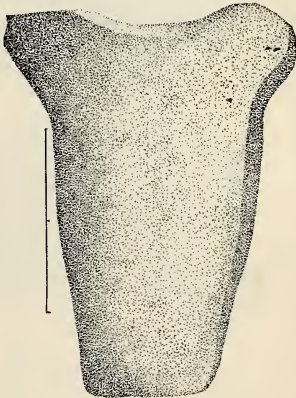


FIG. 45.

Fig. 45. In this specimen we are getting farther from the preceding examples, the common bond being a continuous surface. This blade is black and presents three edges of different form. The lower resembles that of an axe, the two upper ones are different from the lower and from each other. It would not be difficult to lash this blade to a handle, but the form is very rare.

Length, $4\frac{3}{10}$ inches; greatest width, $3\frac{2}{10}$ inches.

Fig. 46. A curiously formed blade of dark color, and highly polished. It is not altogether unlike Fig. 45, the chief peculiarity being the projection upon the upper side. This characteristic does not appear on any other specimen in the collection.

Length, $6\frac{5}{16}$ inches; greatest width, $3\frac{1}{16}$ inches.

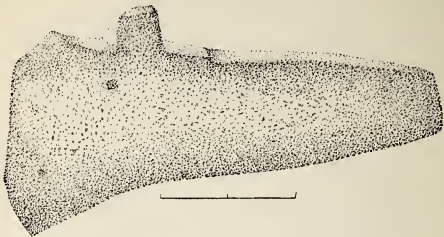


FIG. 46.

Fig. 47. A three-edged blade, of very dark color and veined with white. It resembles Fig. 45, but the workmanship is far superior. The faces and sides are quite flat, giving a rectangular section. One feature is to be remarked, not only here but further on. It is the decided turn of the edge to the bottom, making a pyriform curve.

Length, $8\frac{1}{2}$ inches; greatest width, $4\frac{4}{16}$ inches.

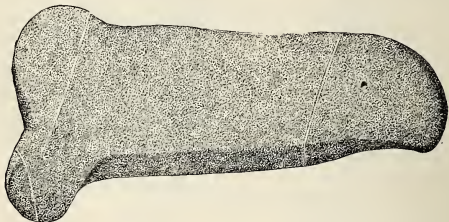


FIG. 47.

IV. BUTT DISTINCT, FACES NOT CONTINUOUS.

The next form of blade to be considered is that in which the butt or head is distinct. This implies a more definite hafting-space, an encircling groove or neck of some kind rather than antero-posterior notches or concavities. It will be seen by running along the members of this section that there are gradations of form, and that this idea of a separate butt is not co-ordinated with any especial kind of haft-space, sides, faces, or edge. Commencing with the simplest type of ax, we pass

through one series of forms to the graceful patu-patu; through another, shouldered variety, to the chopper-knife pattern.

It must be repeated that no such designs of classification are here attributed to the ancient Antillians. They may or may not have been dominated by them. We are only looking at three forces compounding and resolving to bring about a great variety of results, according to the influence of each in any example. These forces are the nature and original form of the pebble, the type-form into whose neighborhood the artist aimed to come, and that sense and pride of achievement which rules in the savage and civilized bosom alike.

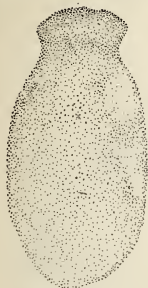


FIG. 48.

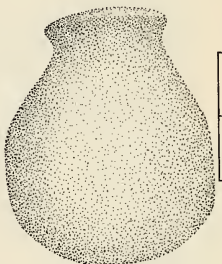


FIG. 49.

Fig. 48. An asymmetrical tongue-shaped blade of gray-brown color. The butt is nearly flat. The groove is very shallow on the faces and deeper on the sides. The latter are not curved alike, a feature quite common in these West Indian specimens. From Canoe.

Length, $4\frac{3}{10}$ inches; width, $2\frac{2}{10}$ inches.

Fig. 49. A very common type, of chocolate-brown patina. The butt is quite flat and bounded by a sharp rim. The haft-space or neck has no boundary below, and the sides are continuous with the edge. These fea-

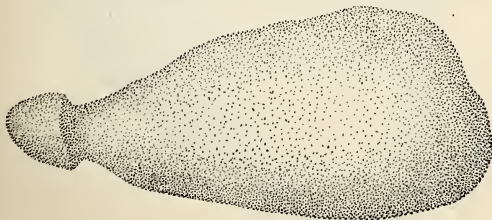


FIG. 50.

tures, with greater or less rudeness, are characteristic of the class now under consideration. From Abymes.

Length, 4 inches; width of neck, $1\frac{7}{10}$ inches; of blade, $8\frac{3}{10}$ inches.

Fig. 50. A very unsymmetrical méri-shaped blade of seal-brown color. The butt is conoid, with irregular base, and overhangs like a cham pignon. The pyriform outline, to be subsequently considered, is quite marked in this specimen. The edge is oblique and very irregular.

Length, $7\frac{1}{2}$ inches; greatest width, $3\frac{4}{10}$ inches; least width, $\frac{9}{10}$ inch.

Fig. 51. An unique blade, semi-ovoid in shape, made of smooth ma

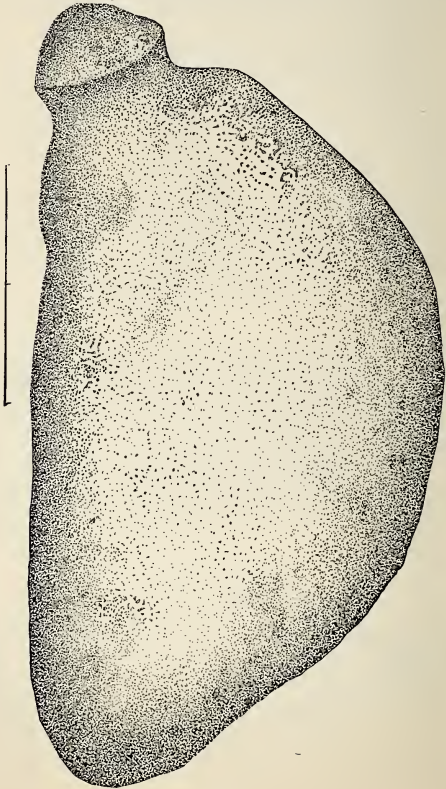


FIG. 51.

terial of a dark brown color. M. Guesde compares the edge with that of a yataghan. In American archæology its general outline is that of the "woman's" knife, so common in collections of Eskimo implements. The latter are mere blades of slate, to be inserted into a grooved handle. In a large collection of these in the National Museum there is a great diversity in the method of attaching a handle.

Length, $6\frac{6}{10}$ inches; width, $3\frac{1}{2}$ inches; width of groove, $1\frac{1}{10}$ inches.

Fig. 52. A very plain blade, of deep brown color. It consists of two elements—the rounded butt, bounded by a much fainter line than the drawing shows, and the right portion, conforming to the type we are now considering. The asymmetry of sides and edge is again thrust prominently into view. This type is said by im Thurn to occur in remarkable abundance in St. Lucia and St. Vincent.

Length, 8 inches; greatest width, $4\frac{7}{10}$ inches.

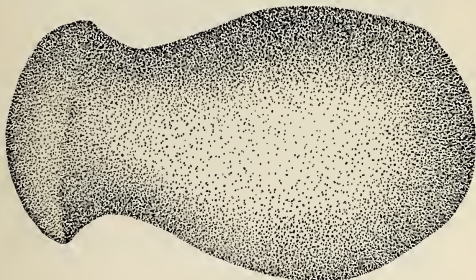


FIG. 52.

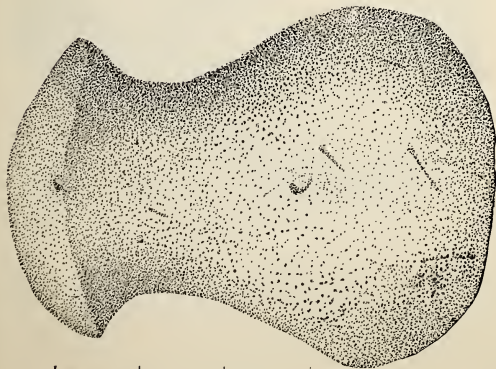


FIG. 53.

Fig. 53. A very gracefully outlined blade, of drab material. The butt is gently rounded and bounded by a trenchant rim, whose plane is curved upward in the middle. All the other parts are continuous. The sides, however, remind us how averse the ancient Antillians were to symmetry.

Length, $5\frac{8}{10}$ inches; width, $4\frac{3}{10}$ inches.

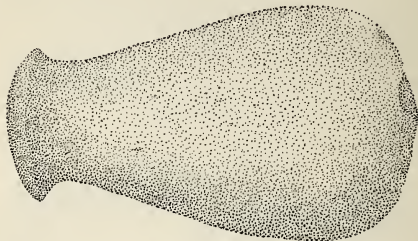


FIG. 54.

Fig. 54. This figure represents a large and beautiful blade, very heavy and close-grained, and black in color. It would take a strong arm to wield this implement. In shape it approaches still nearer to the New Zealand mero, but the handle is still too wide. The sides are very much alike. From St. Rose.

Length, $9\frac{7}{10}$ inches; greatest width, $5\frac{7}{10}$ inches; neck, $2\frac{8}{10}$ inches.

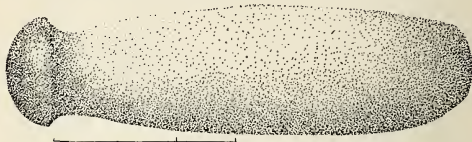


FIG. 55.

Fig. 55. A long, thin blade of peculiar pattern, and dark brown in color. The butt is large in proportion to the body. The two sides do not quite correspond, and the edge is adapted to this fact, showing just the slightest tendency to the bill-hook variety, to be described further on.

Length, 8 inches; greatest width, $2\frac{2}{10}$ inches.

Fig. 56. A broad, mero-shaped blade of dark surface. The butt is small, rounded, and overhanging. The lower side is much more prominent. The whole appearance of this specimen indicates that it came to its present shape without much artificial modification.

Length, $7\frac{6}{10}$ inches; width, $4\frac{7}{10}$ inches.

Fig. 57. A broad, mēri-shaped blade of dark seal-brown color. Excepting the slight fractures on the face, the implement is perfect, unless the truncated portion on the lower side at the edge is an afterthought,



FIG. 56.

having been ground off to hide a break. We are now approaching the real mēri and may imagine ourselves in the neighborhood of New Zealand.

Length, 5 inches; width, $3\frac{1}{2}$ inches; neck, $1\frac{8}{10}$ inches.

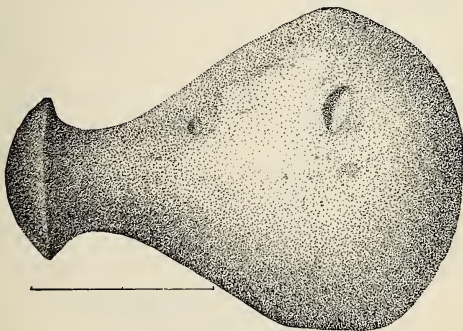


FIG. 57.

Fig. 58. A beautifully polished blade of light brown color. It is mēri-shaped. The butt is gently rounded, bounded by a ridge, curved transversely in a "line of beauty," and ornamented with nine mamiform protuberances. The other elements form one continuous and graceful outline, save a slight fracture on the right extremity of the edge.

Length, $6\frac{2}{10}$ inches; width, $4\frac{4}{10}$ inches; width of neck, $2\frac{1}{10}$ inches.

Fig. 59. A broad, mēri-shaped blade of bright brown color. The

butt is very slightly rounded and the neck or handle almost long enough for the hand. There is a very slight division in this specimen between the butt and the neck, and between the sides and the edge.

Length, 8 inches ; width, 6 inches.

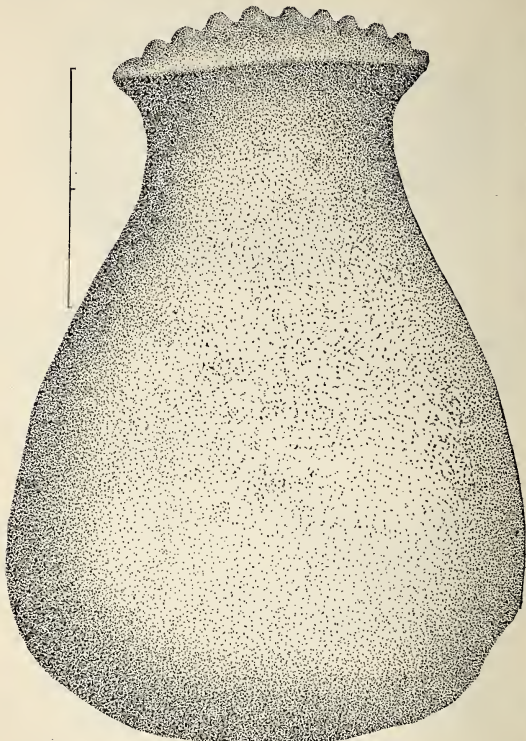


FIG. 58.

Fig. 60. This blade of green and brown mottled appearance approaches nearer still to the typical *mēri*. The butt is formed by a bent surface having a rim about two millimeters in thickness. The neck or handle is nearly three inches long. The straight and the bulging side can readily be seen here, and the edge shows good signs of use. From Lamenton.



FIG. 59.

Length, $7\frac{2}{10}$ inches; width of butt, 2 inches; of neck, $1\frac{3}{10}$ inches; of blade, $3\frac{6}{10}$ inches.

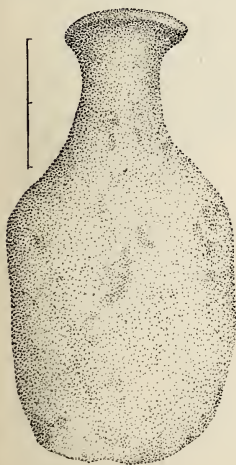


FIG. 60.

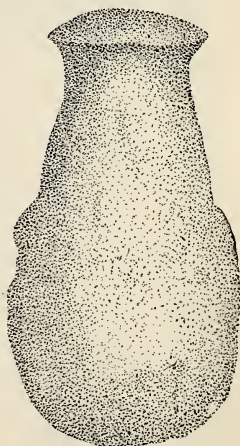


FIG. 61.

Fig. 61. A very finely polished, massive blade of black color. The méridien shape is apparent, but the general appearance is too stout and broad. Especial attention is called to the unlikeness of the sides. The
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right is not unlike many others, with a tapering neck shouldered at the side. The left side repeats this character, adding sinuosities on the side below the neck. The edge is quite symmetrical, and the specimen is a very attractive one. From Marie Golante.

Length, $9\frac{1}{2}$ inches; width of butt, $3\frac{9}{10}$ inches; of neck, 3 inches; greatest width of blade, $5\frac{6}{10}$ inches.

Fig. 62. New Zealand mēri, introduced here by M. Guesde to illustrate the type and climax of blade which is now under consideration. The material is a green jadoid. Gustav Klemm draws attention to the

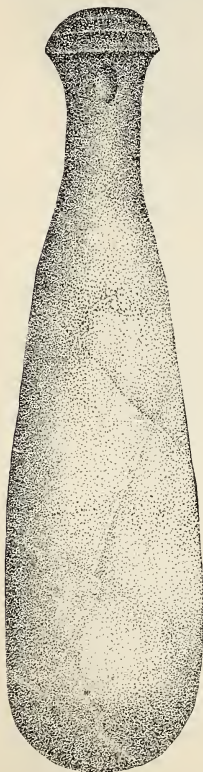


FIG. 62.

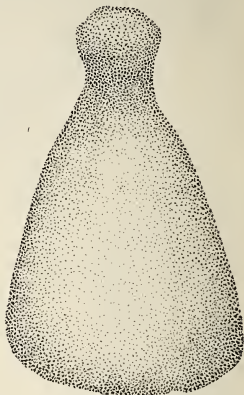


FIG. 63.

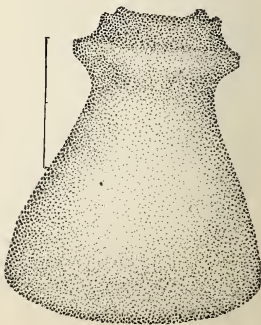


FIG. 64.

fact that on the coast of New Zealand extensive layers of flat and blade-shaped pebbles of nephrite furnish the natives with ready materials for the fabrication of hatchets, knives, and other implements. No less true is it that in the West Indies, where no calcareous flint occurs, "Nature, the kind old nurse, took her child upon her knee," and taught him to utilize the materials at hand for their convenience and happiness. The term *mēr* (pronounced may-ree) is preferred to *patu*, the latter term meaning generically any striking weapon.

Length, 13 inches; width, $3\frac{4}{10}$ inches.

Fig. 63. A blade of slaty-black material. The butt is very small and knob-like, and the haft-space shallow. The sides widen out unevenly, so as to give the contour of a scapula or hand-ax. The form is rare, and serves to connect the ruder *méri* with the two following examples.

Length, 6 inches; width, $3\frac{8}{10}$ inches.



FIG. 65.

Fig. 64. A blade of the hand-ax type, of a bright brown patina. The butt is gradined in a peculiar manner and bounded by a prominent ridge. The work of ornamenting the butt is admirably done, giving the appearance of hollow dishes fitting one into another. The unsymmetrical sides are also visible here, although the implement does not show much use. A similar butt and edge with parallel sides is seen in a specimen from St Vincent, belonging to E. B. Griffith (*Timehrzi*, III, p. 111, Fig. 5), and a very much ruder specimen in Fig. 1, p. 264, of Volume I.

Length, 5 inches; width of edge, 4 inches; of neck, 2 inches.

Fig. 65. A finely polished blade of brown color. This is one of the most beautiful specimens in the collection. The butt has a bounding ridge very prominent, the curved surfaces above and below nearly alike. Two gradines above this are carved in the shape of an opera hat or the sheath of the lace palm doubled in and dented on the top. The unlike sides are very well seen here.

Length, $5\frac{1}{10}$ inches; greatest width, $4\frac{1}{10}$ inches.



FIG. 66.

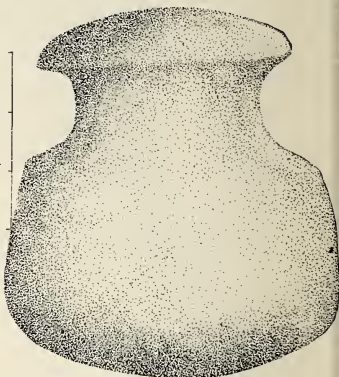


FIG. 67.

Fig. 66. A very common form of blade, of light brown color. The butt is coarsely made and slightly ridged. The hafting or lateral notches very unlike, which also causes asymmetry in the sides and edge. This specimen will serve as an introduction to what may be called the meat-chopper type, more fully developed further on. From Marie Golante.

Length, $4\frac{1}{2}$ inches; width of blade, $3\frac{8}{10}$ inches.

Fig. 67. A very smoothly finished blade, but of the same type as the last and very dark in color. Without ornamentation or wear, the parts are all strikingly distinct.

Length, $5\frac{9}{10}$ inches; width, $4\frac{7}{10}$ inches.

Fig. 68. A very common form of blade of seal-brown color, seeming to have been cut from a simple pebble by excavating an encircling groove, hooded above and running out on the sides and faces. The difference of depth in the groove between the sides and the faces is well marked by the contour of the neck on its lower border. The asymmetry so frequently noticed is very strong here.

Length, $2\frac{9}{10}$ inches; width, 2 inches.

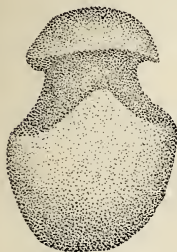


FIG. 68.

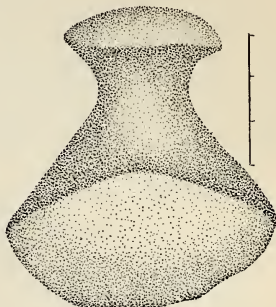


FIG. 69.

Fig. 79. A much worn blade of black color. The original shape may have been like a mēri, but constant grinding has brought it more to the chopper form.

Length, $3\frac{1}{2}$ inches; width, $3\frac{1}{10}$ inches.

Fig. 70. A much worn blade of black color, quite like the modern chopping knife, or Eskimo woman's knife. The butt is rough and small, the neck long and tapering, suddenly widening below to the edge. From one of the islets of Pointe-à-Pitre.

Length, $3\frac{2}{10}$ inches; neck, 1 inch; width of blade, $3\frac{8}{10}$ inches.

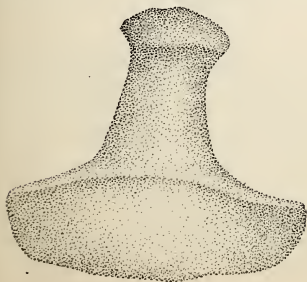


FIG. 70.

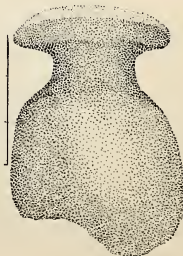


FIG. 71.

Fig. 71. A blade of very dark color, which in outline resembles a shoemaker's hammer. The butt is nearly as wide as the blade, neatly curved, and bounded by a flat border. The neck is gracefully curved and hooded. The faces are flat as if much worn. A portion of the edge is wanting. From Marie-Golante.

Length, 6 inches; width of blade, $4\frac{1}{2}$ inches; of neck, $1\frac{2}{10}$ inches; of butt, $3\frac{8}{10}$ inches.

Fig. 72. A very symmetrical and substantial looking blade of dark brown color. The lines on this specimen are all nearly true, but the noticeable feature is the appearance every where of sharp boundaries. The butt is bordered below by a flat band, and a chamfered surface on both faces bounds the haft space or neck and the edge. Here we have the chopper shape completely developed.

Length, $5\frac{8}{10}$ inches; width, $4\frac{1}{2}$ inches.

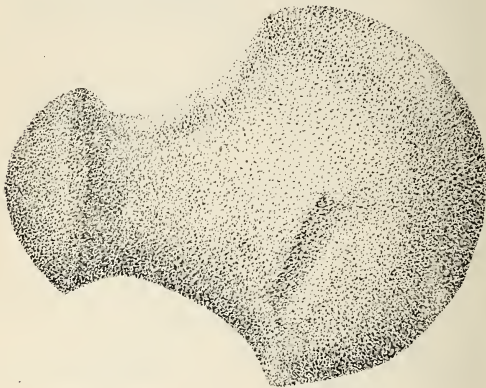


FIG. 72.

Fig. 73. A chopper-shaped blade, very thin and well preserved, of brown color. The lines on this specimen are still more sharply defined, but the edge has no bevel. Especial notice should be taken of the square sides, giving a true rectangular section to the haft-space, and the hooks at the ends of the edge.

Length, $3\frac{4}{10}$ inches; width of butt, $1\frac{8}{10}$ inches; of neck, $1\frac{2}{10}$ inches; of blade, $4\frac{6}{10}$ inches.

Fig. 74. An ornamental blade of the chopper-knife variety, and in color a seal brown. By comparing this with the last specimen an advance in elaboration will be noticed in the curves and gashes at the extremities of the edge.

There are several chopper-blades in the collection, reminding one of the Gaveoe Indians of Brazil, mentioned in Flint Chap. p. 141, quoted from Proc. Soc. Antiquaries, 128 S, vol. 1.

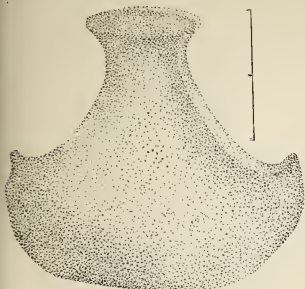


FIG. 73.

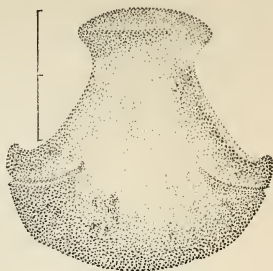


FIG. 74

Length, 4 inches; greatest width, $4\frac{1}{10}$ inches; least width, $1\frac{6}{10}$ inches.

Fig. 75. A very beautiful blade of light brown color. The butt has a sharply-defined ragged border. The terraced appearance before noticed is here visible, but curtailed, the middle ridge not being continuous. The neck slopes gracefully to the edge, the extremities of which rise out of the sides so as to give the effect of a thin edge inserted. There is not the slightest defect in this example.

Length, $4\frac{4}{10}$ inches; width, $4\frac{1}{10}$ inches.

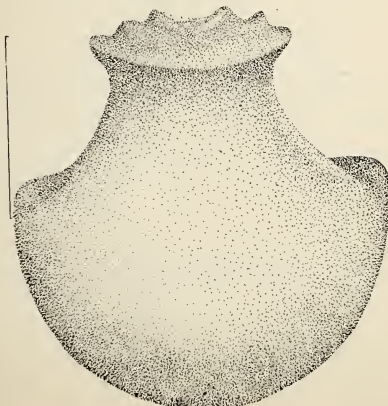


FIG. 75.

Fig. 76. A highly-polished blade, of dark, sooty brown patina. The elements of several previously-mentioned blades are here to be seen. The butt has the double eagle head with central perforation, seen in figure. The tapering haft-space has been frequently mentioned, while the triple scallop with perforation of figure 39 is here bilateral. This example will form the climax of this type of blades, and it is well worthy to hold that position.

Length, $9\frac{1}{2}$ inches; width of blade, 8 inches; of haft-space below, $4\frac{1}{2}$ inches; width of butt, $4\frac{3}{10}$ inches.

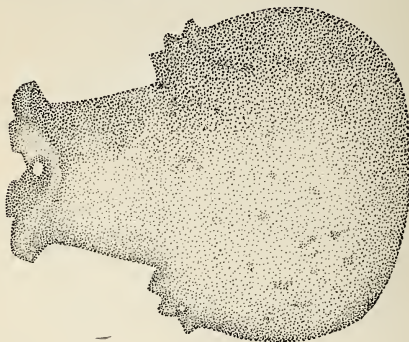


FIG. 76.

V. BLADES WITH HOOKED EDGES.

In the small series of blades now to be presented, a characteristic previously noticed as being more or less apparent in the work of those barbaric peoples who work without compass or rule, will be brought more prominently into view. Indeed, to use the language of biology, varietal marks become fixed and specific. Another wonderful law of biology is also noticeable. It is this, that no part of a structure can undergo any great modification without profoundly affecting many other parts. Nature has changed her key-note and the whole composition must be played on another scale. It is hard to guess what this bill-hook form in so many blades can signify. In vain we turn to Polynesia or Queen Charlotte Sound for help. In higher civilization the bill-hook does good service, first in the hands of the soldier, then in those of the hedger. Coming to view in this Carib environment we are left to wonder. Most of M. Guesde's specimens of this class are very large, massive indeed, and most carefully polished. We shall be able to show a gradation of form beginning with suggestion and ending with unmistakable reality.

Fig. 77 A massive blade of black color, the largest specimen in M. Guesde's collection. The general type is common enough in the Antilles, and indeed may be seen almost everywhere. However, the two sides

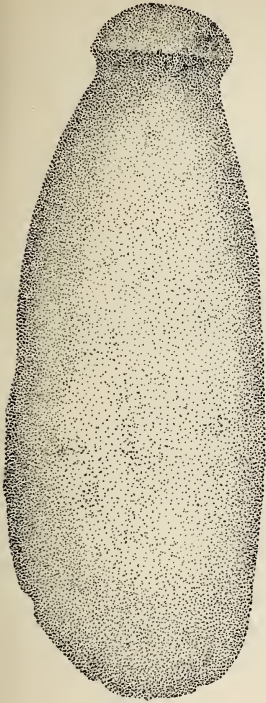


FIG. 77.



FIG. 78.

are decidedly unlike, the right nearly straight, the left bulged out; and by this fact the edge is so modified that the left is continuous with the side, and the right nearly arrested by a corner.

Length, $16\frac{2}{10}$ inches; greatest width, 6 inches.

Fig. 78. A specimen resembling the last described, of light gray-brown color. The butt is not elevated, and its band is emarginated at the sides. Here we may see a little greater modification from the type by the in-

curving of the left side and a nearer approach to a hook below. The surface is finely polished and the combination of marks unique.

Length, $8\frac{1}{2}$ inches; width of butt, $2\frac{8}{10}$ inches; of blade, $3\frac{8}{10}$ inches.

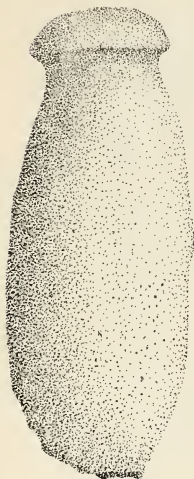


FIG. 79.

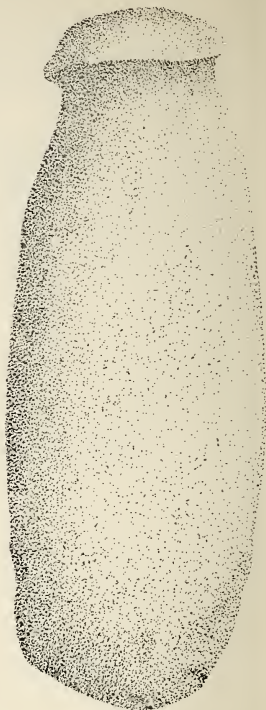


FIG. 80.

Fig. 79. A massive blade of brown color. The lower border of the rounded butt is nearly square with the axis of the specimens, and evenly rimmed; the sides, however, are very different. The break at the most important point at the bottom prevents our knowing just how the hook was finished.

Length, $12\frac{1}{2}$ inches; greatest width, 5 inches.

Fig. 80. A massive blade, of dark brown color. The lower margin of the butt is not horizontal, its facial outline forming a sigmoid curve.

In some other examples the butt is modified by the lateral asymmetry. The point of coalescence of the left side with the edge is quite distinct although it is not yet quite a hook.

Length, 11 inches ; greatest width, $4\frac{1}{10}$ inches.



FIG. 81.

Fig. 81. A beautifully polished massive blade, of light drab color. The inner edge of the butt is nearly straight and banded. In the other parts our type is carried out, the only advance being the change of curve near the edge at the lower side. The specimen is highly finished and would be an attractive object in any collection.

Length, $13\frac{2}{10}$ inches ; greatest width, $4\frac{2}{10}$ inches.



FIG. 82.

Fig. 82. A giant blade, of mottled color, resembling marble. Here will be seen the bill-hook type quite fully developed. The sloping butt, the totally unlike sides, and the extension of the edge well beyond the line of the lower side are all noteworthy. The remains of fluting, visible all around the sides and edge, stamp this specimen with a form to which Nature has not contributed a suggestion ; they also show how such implements were constructed.

Length, $14\frac{7}{10}$ inches ; greatest width, $6\frac{2}{10}$ inches.

Fig. 83. A massive blade of light brown color and highly polished. The small, rough butt belongs to quite another order, indeed, in this

respect, the specimen ranks very low. Aside from this, however, it is an attractive example of its type. The bulging of the hooked side is noteworthy but not unique.

Length, $10\frac{1}{2}$ inches; width, $4\frac{3}{4}$ inches.

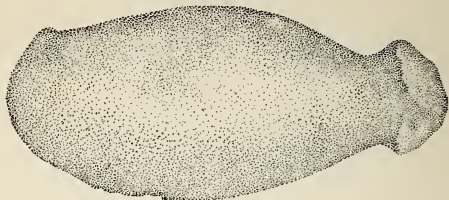


FIG. 83.

Fig. 84. A broken blade, of blackish brown color. It is placed here for the purpose of showing that in archæology a little prediction may be indulged in. In every other particular the specimen resembles the bill-hook type. Should the missing portions be found, therefore, the upper side would pass on in a continuous curve with the edge to the lower extremity of the under side, where it will form an angle or a hook.

Length, $11\frac{1}{2}$ inches; greatest width, $4\frac{3}{10}$ inches.

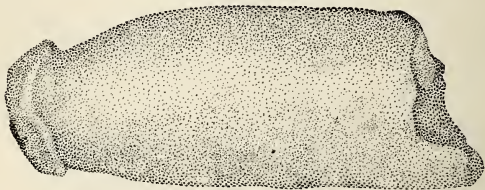


FIG. 84.

Fig. 85. A smaller bill-hook or pyriform blade, of light brown color. The rudeness of the butt and groove is remarkable. The other lines are very graceful, especially that of the upper side.

Length, $4\frac{2}{10}$ inches; width $1\frac{5}{10}$ inches.



FIG. 85.

Fig. 86. A massive blade, of the bill-hook type, and slate brown in color. The butt still has some eccentricities, more than compensated for, however, by the elegance of the other portion.

Length, 9 inches ; greatest width. 4 inches.



FIG. 86.

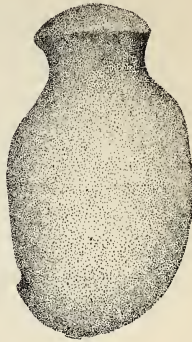


FIG. 87.

Fig. 87. A perfect blade, brown in color and of exquisite polish. It is not massive. The butt is horizontal and the hooked side unusually curved. The hook is more decidedly formed in this than in any other members of the class.

Length, $5\frac{2}{10}$; width of blade, 3 inches ; neck, $1\frac{5}{10}$ inches.

Fig. 88. A finely-polished blade, of the bill-hook type and of a rich brown color. Aside from the fidelity with which the typical ideas are carried out, should be noted also the change of curve in the edge and



FIG. 88.

in the margin of the butt nearly over it. This is the last specimen of this variety which will receive notice.

Length, $7\frac{6}{10}$ inches; width, $4\frac{3}{10}$ inches.

VI. BLADES WITH ENCIRCLING GROOVES.

The next type of blades embraces many examples in the Antillian area, extending from a very rude form to some of the greatest beauty. The encircling grooves or excavations for hafting in a large series of stone implements will be found to include many geometric figures in other parts of the implements, such as the circle, ellipse, *vesica piscis*, and any of these may have one or two truncations. The grooves will also differ in their position on the blade. in depth, width, and the construction and parallelism of their borders. In the series of hafted hammers, hoes, adzes, and axes in the National Museum at Washington, one can readily perceive that even the savage workman was not shut up to a single device in hafting his tools. Indeed, such is the diversity of methods that one familiar with a large number of specimens learns to pick out localities and nations by the methods used.

Another fact illustrated in this series is the easy transition from useful to highly ornamental forms. Beginning, as Klemm has advised us, with little modified pebbles, we culminate in examples wherein every vestige of nature and use is lost.

Fig. 89. A small blade of blackish color. The very least opportunity is afforded for hafting, but we may refer again to John Evans. Marie-Golante. Neither this nor the following example can fully claim to be a grooved blade.

Length, $1\frac{4}{10}$ inches.

Fig. 90. A small blade of dark brown color. This specimen is a little more highly finished than the last, but the characteristics are identical.

Length, 2 inches.

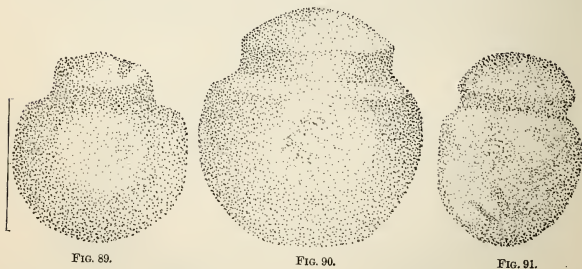


FIG. 89.

FIG. 90.

FIG. 91.

Fig. 91. The smallest blade in M. Guesde's collection; light drab color mottled with brown. The groove is now encircling and distinguishes the butt entirely from the body.

Length, $1\frac{1}{2}$ inches; width, $1\frac{1}{10}$ inches.

Fig. 92. A grooved blade of very dark brown color. There is a delightful *negligée* about the lines of this example. There is neither symmetry nor parallelism where either one should be found in a perfect specimen. The marks of much wear are visible on the edge.

Length, $2\frac{3}{10}$ inches.

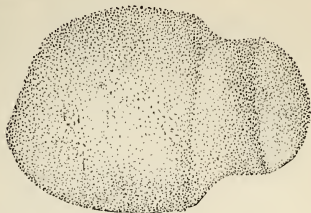


FIG. 92.

Fig. 93. A very irregular blade of light brown color. There is every reason to believe that the only change wrought in the original stone is the groove or neck hooded above and running nearly out below, so as to be undistinguishable from the faces and the ground edge.

Length, $7\frac{1}{10}$ inches; width of edge, $4\frac{1}{2}$ inches.

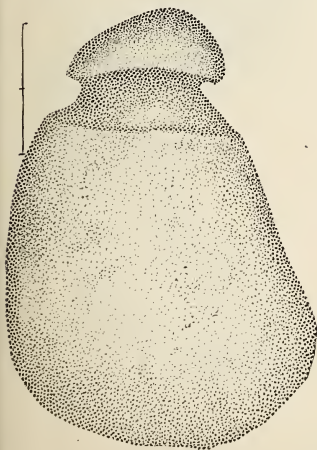


FIG. 93.

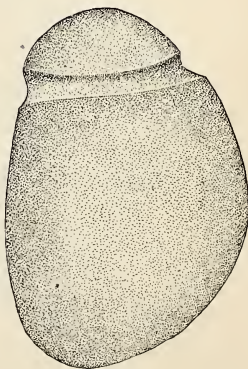


FIG. 94.

Fig. 94. A beautifully polished blade of drab color. The type is very similar to that of the last described, but the original stone was more

shapely. Here for the first time we encounter a definitely-cut encircling groove.

Length, $2\frac{7}{10}$ inches; width, 2 inches.

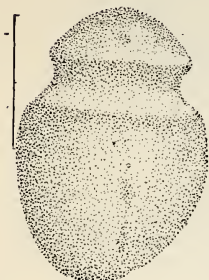


FIG. 95.

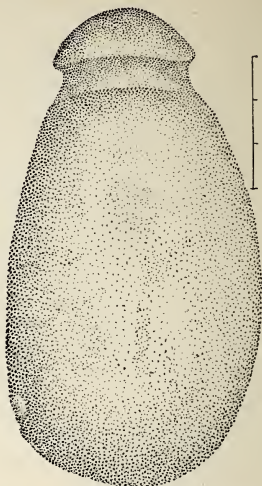


FIG. 96.

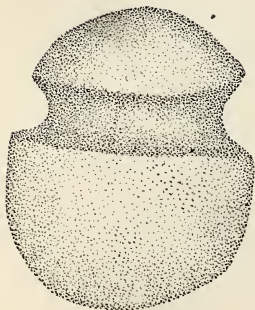


FIG. 97.

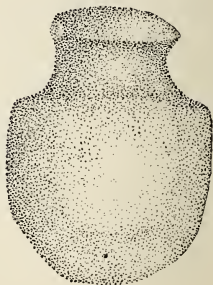


FIG. 98.

Fig. 95. A grooved blade, of light brown color. The butt is quite symmetrical, the groove uniform and transverse, and the edge nearly regular. The type is common all over the world. From Marie-Golante. Length, $4\frac{1}{10}$ inches; width, 3 inches.

Fig. 96. A massive blade, with very small head and groove, of very dark brown color. The asymmetry of the sides is noticeable, and there is just a slight hook on the left. This stamps our classification as purely artificial. If we regard the groove we must cast neglect sometimes upon the edge. From San Mahault.

Length, 11 inches; width, 6 inches.

Fig. 97. A grooved blade, of dark slate color. The butt and the body are nearly regular; the former occupying one-third of the object.

Length, $2\frac{1}{2}$ inches.

Fig. 98. A grooved blade, of light brown color. The noticeable feature is the hatchet edge extending on both sides to the groove. The butt is the most finished yet in this class.

Length, $2\frac{1}{10}$ inches.

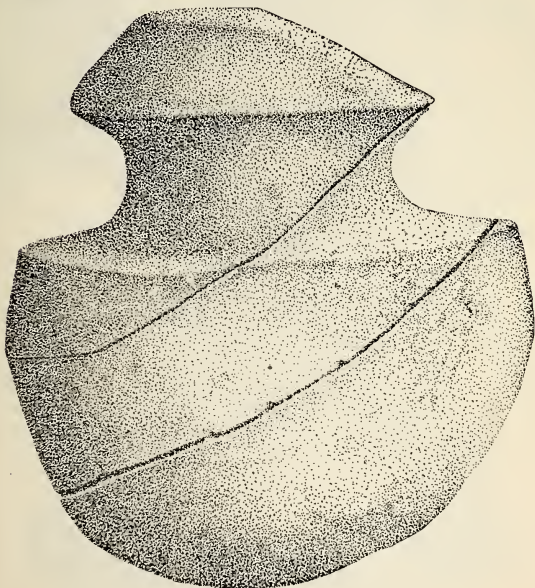


FIG. 99.

Fig. 99. A giant blade, of light brown color. When entire this must have been an imposing object. The butt originally was flat-topped and very symmetrical, the groove broad, deep, and parallel-sided. The body is of the chopper variety mentioned in the last class (Figs. 70 and following).

Length, 10 inches; greatest width, $8\frac{2}{10}$ inches.

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Fig. 100. A much worn blade of very light color, showing that it has been "battered by the shocks of doom to shape and use." The conformity to the shape so common in the United States ought to be noticed. The edge and faces are well ground away.

Length, 4 inches; width, $3\frac{3}{10}$ inches.

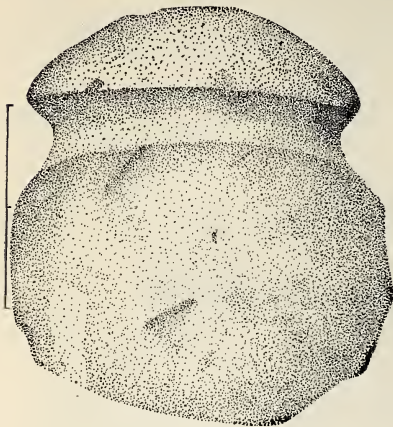


FIG. 100.



FIG. 101

Fig. 101. A small grooved blade, which M. Guesde calls a mace. Unless the painting is misleading it is a very pretty, unpretentious example of the small, grooved ax.

Length, $1\frac{4}{10}$ inches; width, $1\frac{1}{10}$ inches.

Fig. 102. A long thin blade of light brown color. The butt is cylindrical and rough topped. The notch is shallow and the sides are nearly parallel. This is a rare form in the Antillian area.

Length, $7\frac{2}{10}$ inches; width, $1\frac{7}{10}$ inches.



FIG. 102.

Fig. 103. A long slender blade, of blackish color, shaped something like a ten-pin. The butt and encircling groove are one. The long, flat faces terminate in a squared edge.

Length, $6\frac{2}{10}$ inches; width, $2\frac{1}{10}$ inches.

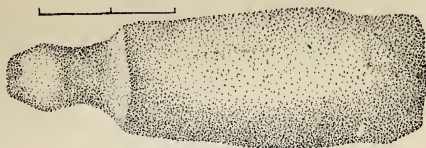


FIG. 103.

Fig. 104. A grooved blade of dark brown color. It resembles Fig. 103, excepting that the butt is more distinct and the sides divergent. The edge is much worn by use, and the concave grinding very uncommon.

Length, 4 inches; width of blade, $3\frac{3}{10}$ inches.

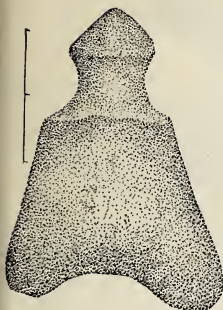


FIG. 104.

Fig. 105. A very attractive blade of bright brown color. The object shows great age by reason of the grinding which has taken away a portion of the butt and changed the outline of the lower border of the groove. The polish and unbroken condition of a specimen so much worn are remarkable.

Length, $5\frac{8}{10}$ inches; width, $5\frac{1}{10}$ inches.

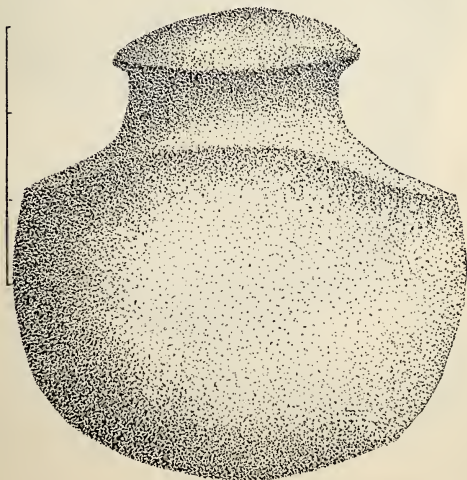


FIG. 105.

Fig. 106. A very smooth and rare form of blade of dark brown. The butt is of the champignon type and has very little boundary below. The two sides are unlike giving the face the appearance of a shoe sole. The edge is also one sided.

Length, $5\frac{7}{10}$ inches; width, $3\frac{2}{10}$ inches.

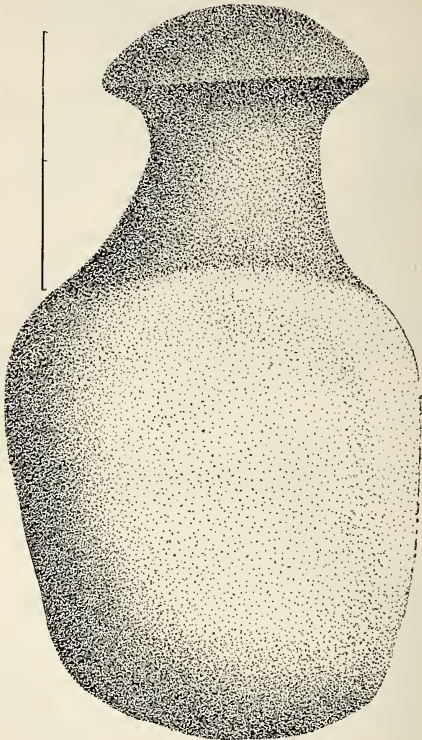


FIG. 106.

Fig. 107. A highly polished blade of brown-black color. It is almost a perfect ellipse in outline excepting the interruption of the groove. The borders of the groove are slightly ridged. By this is meant that from the crest of the ridges the surfaces decrease both ways by a concave curve.

Length, $5\frac{1}{10}$ inches; width, $3\frac{1}{2}$ inches.

Fig. 108. A polished blade of bright brown color. This specimen, though not extraordinary in form is one of the most attractive in the collection of M. Guesde. It could hardly be more regular if it had been formed in a lathe. The shield shaped faces are rare, and the shouldering of the faces worthy of notice.

Length, 7 inches; width of neck, 2 inches; of blade, $4\frac{1}{2}$ inches.

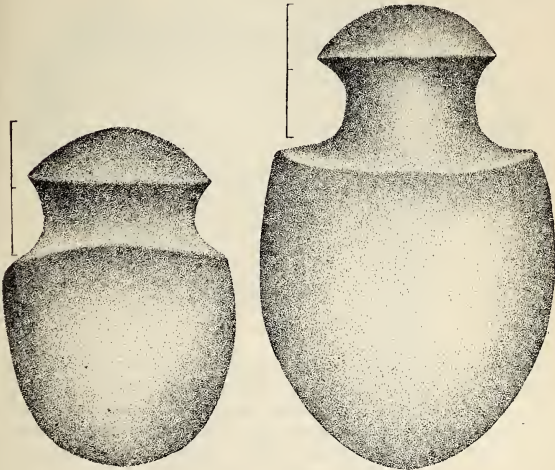


FIG. 107.

FIG. 108.

Fig. 109. A double-edged, grooved blade, of light brown color. The form is common enough elsewhere, but certainly it seems to be the first appearance in this area of an ax with both ends alike.

Length, $7\frac{2}{10}$ inches; width, $3\frac{1}{10}$ inches.

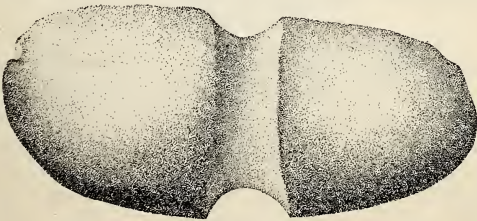


FIG. 109.

Fig. 110. A beautifully polished blade, of bright brown color. In shape it resembles a butcher's cleaver, well worn. It should be compared with figures 77 to 88. In the curve of the right side the bill-hook form recurs, and, in this respect, this specimen should have been described in the last chapter.

Length, $7\frac{7}{10}$ inches; greatest width, $4\frac{2}{10}$ inches.

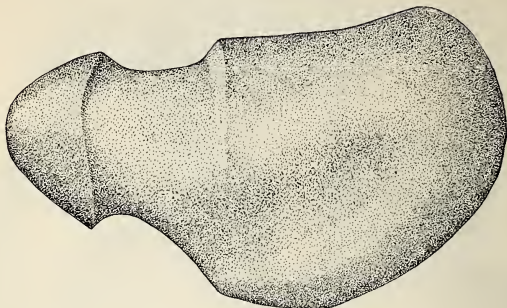


FIG. 110.

Fig. 111. A massive blade of slaty gray color. This specimen also by its edge goes to the bill-hook type. (See figures 77 to 88.) The sinuate groove and broken sides should be noticed. It is customary to take the groove on axes largely into account, but in this example, as well as in figures 93, 94, 96, and 110, the salient feature is the twisting of the contour of the implement to one side, forming a decided hook in many examples.

Length, 12 inches; greatest width, $4\frac{8}{10}$ inches.



FIG. 112.

Fig. 112. A grooved blade of gray color. This form is so common in the United States and so absolutely unknown in the West Indies that the probabilities are against its genuineness. M. Guesde, however, is our authority for placing it in Guadeloupe. Looking over a large number of ax-blades from the United States, one is struck with the prevalence of this particular type, with the left boundary of the neck ridged up on both sides, in areas widely separated.

Length, $3\frac{2}{10}$ inches; width, $1\frac{2}{10}$ inches.

Fig. 113. A grooved ax of reddish brown color. It is of a very common pattern, excepting the bulging of the right side, which gives it the appearance of having been cut out for a shouldered handle. (See Fig. 118.)

Length, $5\frac{1}{2}$ inches; average width, $2\frac{1}{10}$ inches.

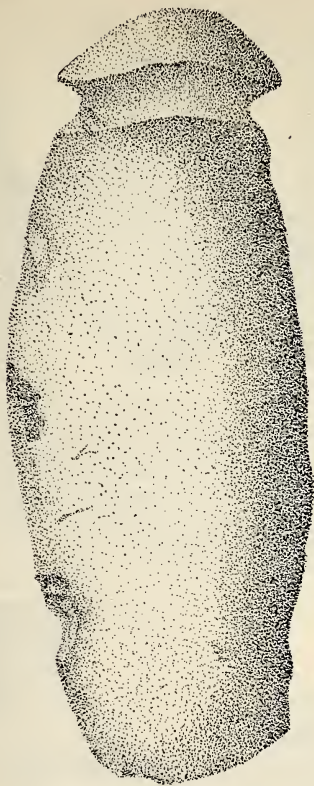


FIG. 111.

Fig. 114. A gracefully formed blade of very dark material. The remarkable characteristics are the double furrow and cup ornament of the butt, the elongated groove, and the tongue-shaped faces. The workmanship is very fine.

Length, $4\frac{8}{10}$ inches; width of blade, $2\frac{7}{10}$ inches.

Fig. 115. A beautiful blade of greenish brown color. The remarkable features are four little mammæ at the apex, the bell-shaped butt, the slender groove, and the small faces.

Length, $4\frac{1}{2}$ inches; width, $2\frac{4}{10}$ inches.



FIG. 113.

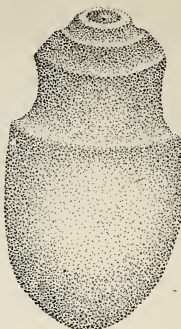


FIG. 114.



FIG. 115.

Fig. 116. A chopper-shaped blade of brick-red color. The butt and the face are boat-shaped, the former much smaller. The groove or neck is much thinner and cut away at both extremities. The sides are not symmetrical. (See Evan's figure, from Brazil, a war-ax of the Gaveoe Indians, in the British Museum, described in *Ancient Stone Implements*, figure 95. Compare also figure 96.)

Length, $3\frac{1}{2}$ inches; width, $3\frac{1}{2}$ inches.



FIG. 116.

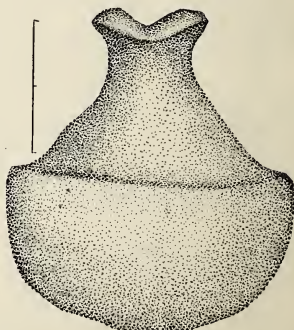


FIG. 117.

Fig. 117. A chopper-shaped blade of bright brown patina. There is in this specimen an interesting combination of characters. The butt has

a delicate double beak. The haft-space or neck widens rapidly, but is slightly shouldered all around its base. A similar butt and edge, with parallel sides, is to be seen in a specimen from St. Vincent, belonging to E. B. Griffith (*Timehri*, III, pl. vii, Fig. 3; and a very much ruder specimen in *Id.* I, 264, Fig. 1).

Length, 5 inches; width, 4 inches.



FIG. 118.

Fig. 118. A grooved blade of dark brown color and fine polish. The butt wedge-shaped and rounded. The hafting space is a complex affair, consisting of four parts, two narrow-faced grooves, a groove on the lower side a little wider, and a long, wide notch on the upper. The section of the groove is rectangular. The same idea of a shoulder on one side of the blade may be studied in a specimen from Mennithorpe, Yorkshire, England. This latter one, however, is very rude, and far behind the Guesde's example. (Evans' "Ancient Stone Implements," Fig. 82.) This blade lashed to a shouldered handle would be a very effective tool or weapon. From Marie-Golante.

Length, 6 inches; width, $2\frac{5}{10}$ inches.

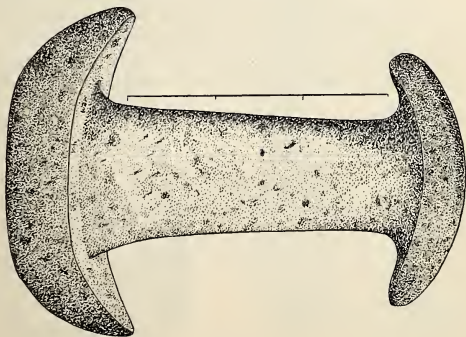


FIG. 119.

Fig. 119. A well-finished blade, of mottled-drab color. The central column is a flattened cylinder. The right portion is spread out like a smoothing tool. The Clallam Indians of Washington Territory, who excel in all kinds of basketry, use a little wooden implement exactly like this to smooth and regulate the wool in their grass and bark mats. The left end is canoe-shaped, and the edge extends to the extremities of the body.

Length, $5\frac{3}{10}$ inches; width of blade, $3\frac{8}{10}$ inches.

Fig. 120. A grooved implement of light brown color. It is introduced here to follow Fig. 119 on account of similarity in groove. The actual function is lost in that of the smoother or rubber. There is a great deal of nice work on this example; indeed, as a work of art it is nearly faultless. The furrows of the sides continued across the bottom of the shaft or neck below give a pleasing impression.

Length, $6\frac{7}{10}$ inches; width of lower blade, $4\frac{1}{2}$ inches.

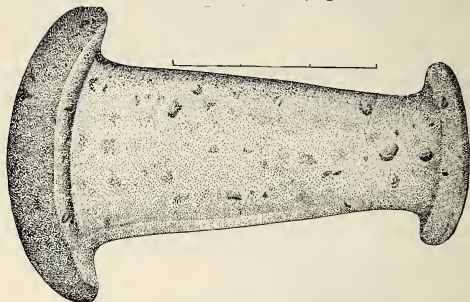


FIG. 120.

Fig. 121. A specimen of unknown function, light brown in color. This form wanders still further away from Fig. 119 than the last one described. The lower portion was formerly fluked, but the points are gone.

Length, 4 inches; greatest width, $2\frac{2}{10}$ inches.



FIG. 121.



FIG. 122.

Fig. 122. A highly polished blade of seal brown color, resembling a chopper knife. It would be difficult to reconstruct the lost part, but it reminds one of the African and Brazilian battle-axes with crescent blades. (Compare *Timehri*, III, pl. 11.)

Length, $2\frac{8}{10}$ inches; width, $2\frac{9}{10}$ inches.

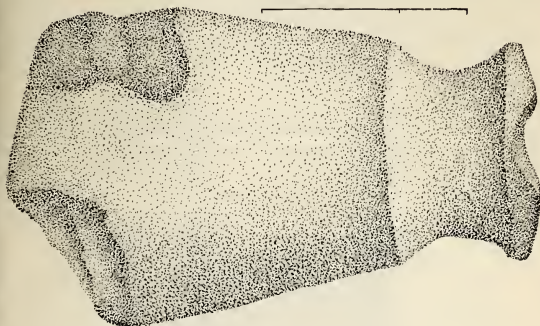


FIG. 123.

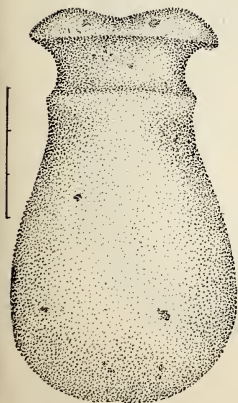


FIG. 124.

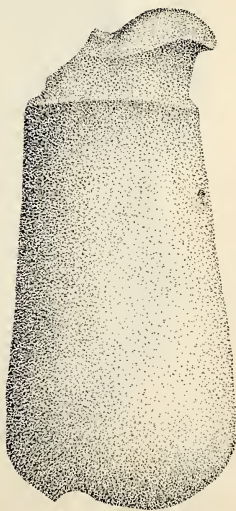


FIG. 125.

Fig. 123. A double-beaked blade of reddish brown surface and black interior. This and the following specimens should be compared with beaked specimens without grooves. There is a slight resemblance between this example and in Thurn's Plate 6, Fig. 1, at least in the long groove and the general outline of the blade.

Length, 8 inches; width, $4\frac{8}{10}$ inches.

Fig. 124. A double-beaked blade of bright drab color. The ridge beneath the groove gives to this example a very pleasing outline. Indeed, without excess of ornament, the whole contour is harmonized with great skill.

Length, 9 inches; width, $5\frac{2}{10}$ inches.

Fig. 125. A double-beaked massive blade of brown color. The curve beneath the beak and the fluting on the top are more elaborate than in the last one described.

Length, $11\frac{2}{10}$ inches; width, $5\frac{2}{10}$ inches.

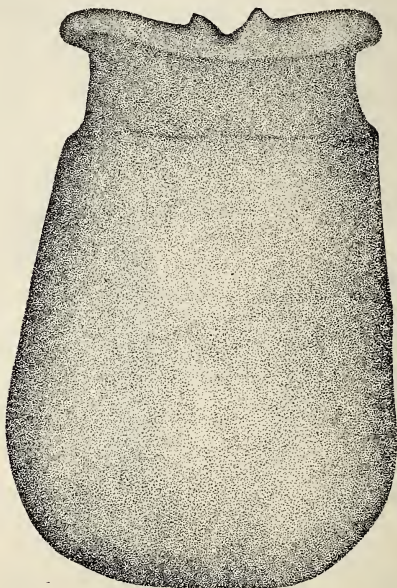


FIG. 126.

Fig. 126. A massive two-beaked blade of dark brown color, and so highly polished that it seems to have been recently made. The treat-

ment of the butt is a little different from that in the previous examples by reason of the width of the specimen. The upper ridge is narrow and the crests near the center.

Length, $8\frac{7}{10}$ inches ; width, 6 inches.

Fig. 127. A two-beaked blade of dark brown color. The lower part is asymmetrical and fractured. The ornamentation left at the top indicates that originally it was a very beautiful object. The egg ornament occurs in other specimens.

Length, $7\frac{1}{2}$ inches ; width, $3\frac{9}{10}$ inches.

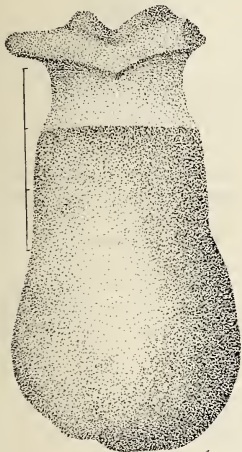


FIG. 127.

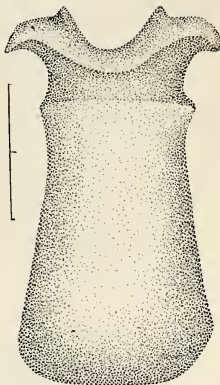


FIG. 128.



FIG. 129.

Fig. 128. A two-beaked blade of blackish-drab color, and perfectly smooth. The lines of this specimen are everywhere bold and graceful. The slender beaks, high crests, and other characteristics are very tastefully combined.

Length, $5\frac{8}{10}$ inches; width of edge, $2\frac{2}{10}$ inches.

Fig. 129. A massive two-beaked blade of mottled, marble-colored stone. The distinguishing feature is the ridged, seal-like depression between the beaks.

Length, $11\frac{3}{10}$ inches; width, $6\frac{4}{10}$ inches.

VII. HAMMERS, GRINDERS, AND POLISHERS.

In most archaeological collections a series of implements are brought together under the titles given above. The idea or concept is that pounding, grinding, rolling or mulling-food, paint, incense, wedges, or human heads, are processes that have no broad dividing lines. Indeed among a people so highly civilized as the ancient Antillians a great variety of such operations would be performed. Mr. im Thurn thinks that since these people were mainly cassava eaters they had little need of mills. True, but grinding is not confined to food even. The Haida and Thlinkit Indians make beautiful mortars and pestles to grind a native tobacco into snuff, and to pulverize dried fish. The Pueblos use grinders for corn and wild seeds, for paint, and to grind up degreasing for their pottery. The innumerable uses of hammers will occur to every one. The order followed in the description is almost arbitrary, the prevailing motive being to proceed from less to greater completeness.

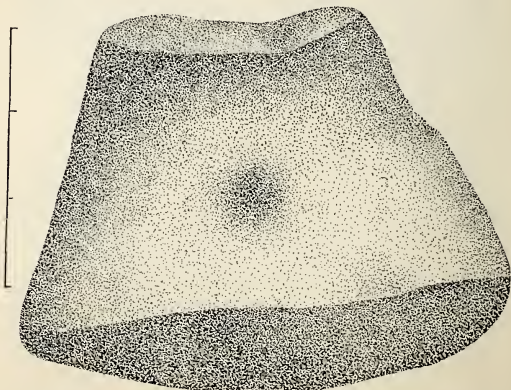


FIG. 130.

Fig. 130. At the risk of missing, a guess may be ventured that this specimen of dark brown stone is a hammer for wooden wedges. A great variety of wedge hammers of stone for splitting logs is used by the American Northwest Coast Indians. The finger pits on the faces should be noticed.

Height, $4\frac{2}{10}$ inches.



FIG. 131.

Fig. 131. A slightly modified water-worn pebble of dark brown color, just as likely as anything else to have been used in rubbing down pottery.

Length, $3\frac{1}{2}$ inches.



FIG. 132.



FIG. 133.

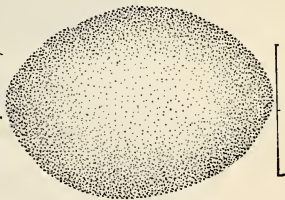


FIG. 134.

Fig. 132. An ellipsoidal form of blackish color. The noticeable features are the flat faces and beveled contour. In the Pueblo country such pebbles are used to rub down the pots before baking. From Gosier.

Length, $2\frac{7}{10}$ inches.

Fig. 133. A grinding stone of deep brown color, formed in the shape of a double conoid. The form is rare in the Antilles.

Height, $3\frac{1}{10}$ inches.

Fig. 134. A blackish stone, elliptical in outline and lenticular in section; highly polished.

Diameter, $4\frac{1}{10}$ inches.



FIG. 135.

Fig. 135. A shoe-shaped specimen of reddish brown patina resembling slightly the whetstones of the mounds.

Length, 6 inches.

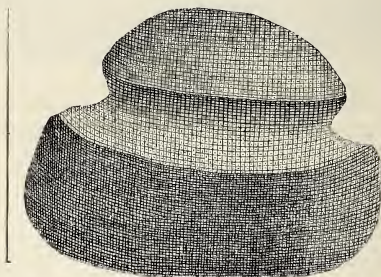


FIG. 136.

Fig. 136. A hammer-head of dark brown color, which would have done good service also as a mace or club head. The upper portion is convex, the groove uniform and the lower portion parallel sided.

Length, $2\frac{8}{10}$ inches.

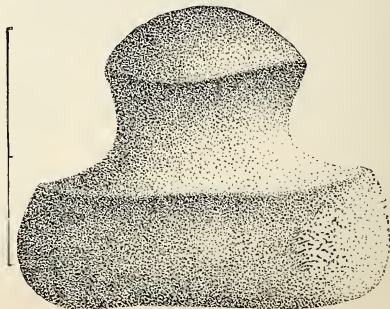


FIG. 137.

Fig. 137. A small hammer of light brown color. There are several implements of this class in M. Guesde's collection, which the owner considers casse-têtes. This may be, but they are just as probably hammers or rubbers.

Height, $2\frac{1}{10}$ inches.



FIG. 138.

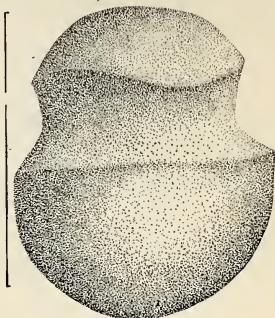


FIG. 139.

Fig. 138. A grooved hammer resembling an old-fashioned printer's pad or an inverted mushroom. The function of the class is still in the dark. See Stevens "Flint Chips," p. 223.

Height, $3\frac{7}{10}$ inches.

Fig. 139. A grooved hammer of dark brown patina evidently made

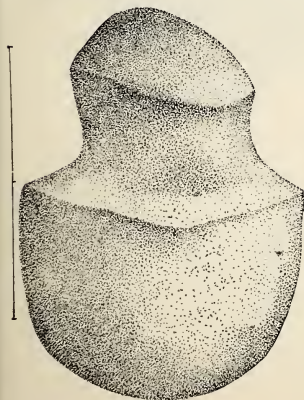


FIG. 140.

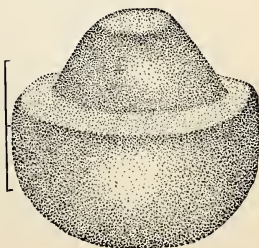


FIG. 141.

from a pebble with little modification. The groove is sinuous and shallow. In outline this specimen resembles an ax, but in M. Guesde's notes it is called a casse-tete.

Length, $2\frac{2}{10}$ inches.

Fig. 140. A grooved hammer resembling the last, but larger. The groove also is wider and has abrupt turns in direction.

Length, $2\frac{8}{10}$ inches.



FIG. 140.

Fig. 141. A doubtful form of light brown color. The truncated cone resting on the bisecting plane of a hemisphere is absolutely unique.

Height, $3\frac{1}{2}$ inches.

Fig. 142. A finely polished specimen of chocolate brown color. The ornamentation is of a high order. It

was probably a rubbing stone or muller.

Height, 3 inches.

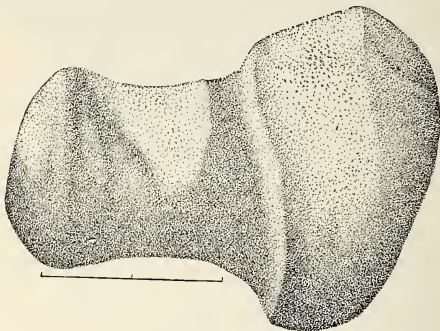


FIG. 143.

Fig. 143. A grooved hammer or pestle of brown color and very irregular in its details, the climax of asymmetry in fact. We are coming nearer to the typical hammers and tritulators of the Northwest coast. Many as rude as this are found in the Ohio Valley.

Height, $4\frac{7}{10}$ inches.

Fig. 144. A grooved hammer or pestle of dark brown color. Mr. H. H. Hill, of Cincinnati, has a very large collection of slanting hammers or mullers taken from the mounds in that vicinity.

Length, $4\frac{1}{2}$ inches.

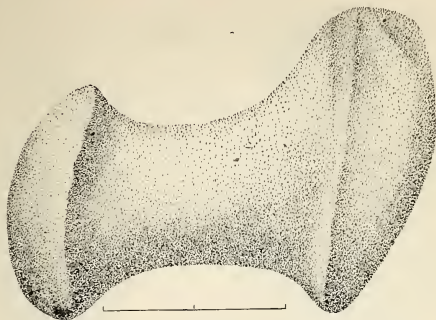


FIG. 144.

Fig. 145. A slanting grooved hammer or pestle similar to the last two. The function, however, is still in doubt. Length, $4\frac{1}{2}$ inches.

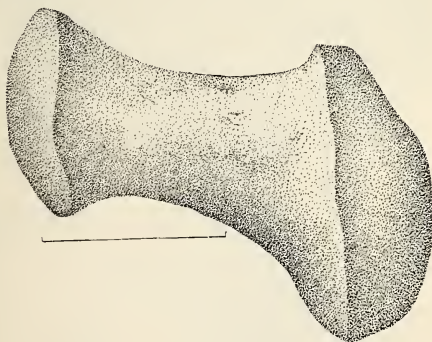


FIG. 145.

Fig. 146. A grooved hammer of light brown color. The implement was made and polished with great care, and the form is rare. Especially noteworthy are the truncated top, the uniform groove, and cylindrical sides. A similar implement from Antigua is figured in Timehri (III, p. 115, pl. 10, fig. 14).

Height, 5 inches.

Fig. 147. A grooved hammer or pestle of green and brown color. This long, pestle-like form is unique, in the Guesde collection.

Length, $4\frac{1}{2}$ inches.

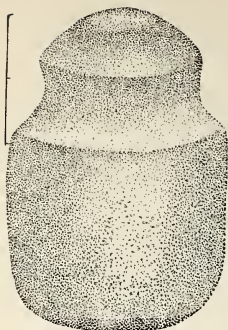


FIG. 146.



FIG. 147.

Fig. 148. A bell-shaped hammer of blackish color. The very large curved base is not unknown to hammers or pestles outside of the West Indies. Several of nearly the same shape may be seen from the Haida Indians in the National Museum. The offset on the rim below at the base of the neck is unique. (See *Timehri*, III, pl. 10, fig. 19.)

Height, $5\frac{1}{2}$ inches.

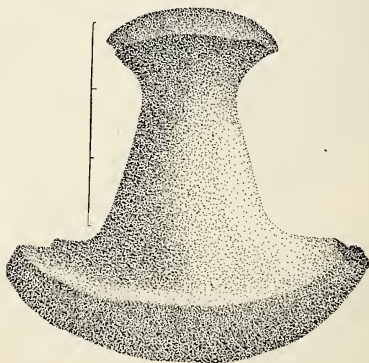


FIG. 148.

Fig. 149. Grooved hammer of brown color, and very highly polished. It is perfectly refreshing to stand once more on solid ground. Whatever

doubt may rest on the preceding examples, there is none here. The National Museum at Washington contains a large number of polished serpentine hammers of precisely this shape. The great red cedar abounds from Sitka along the Pacific Coast to California. The various tribes of this coast, Thlinkits, Haida, Chimsian, Bilhoula, formerly felled these trees with stone implements, and by means of a long line of hard-wood wedges split the logs into planks to be used in their houses and furniture. These wedges were skillfully driven by means of these serpentine hammers. The ancient Antillians felled large trees and both built houses and excavated dug-out boats. There is little doubt, therefore, that we have here the ancient carpenter's hand-maul.

Length, $3\frac{4}{10}$ inches.

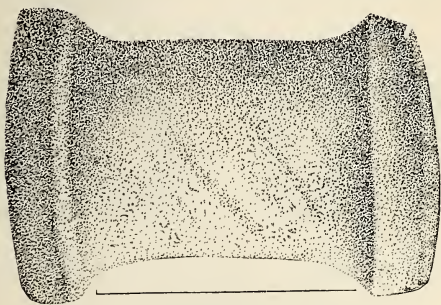


FIG. 149.

Fig. 150. A grooved club-head, widely excavated around three-fourths of its circumference. Stones wrapped with sinew or leather and lashed to a wooden handle were a common weapon with the ancient Dakotas.

Length $2\frac{3}{10}$ inches.

Figs. 151-154. Four grooved discoidal stones of unknown function. Comparing things unknown with things known we may declare

these to have been club-heads or sinkers or playing stones or even ear-studs.

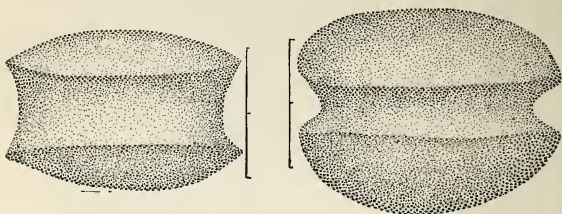
Fig. 155. A flat, grooved club-head shaped like a two-edged battle-ax. The groove is very sharp, or triangular in section, and is deeply cut in.

Length, $4\frac{3}{10}$ inches.

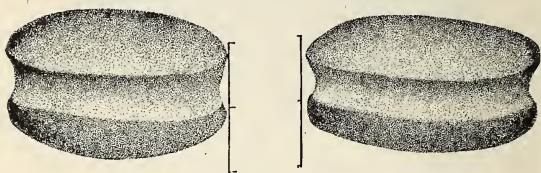
Fig. 156. A spindle-shaped implement, perhaps a rolling-pin, of brown color. In Yucatan the natives now use a roller of this shape, but of

different material. Some of the old metates have hollow beds, also indicating rollers, or mullers, thickened in the middle.

Length, $12\frac{2}{10}$ inches; width, $1\frac{8}{10}$ inches.



FIGS. 151, 152.



FIGS. 153, 154.

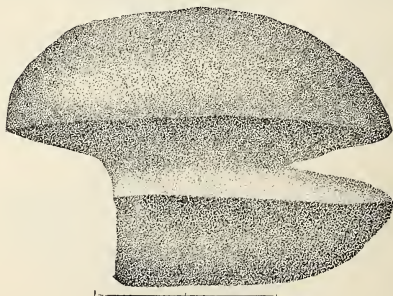


FIG. 155.

Fig. 157. A carved rubbing stone, of brown color. The slanting column and much-curved base, as well as the lateral flutings, extending everywhere except along the bottom, are noteworthy features. The



FIG. 156.



FIG. 157.

Eskimo of Norton Sound and northward excel in fashioning ivory scraper-handles to fit the artisan's hand. At Sitka the Thlinkit Indians also cut out the upper portion of the stone hand-maul to fit the hand.

Length, $4\frac{4}{10}$ inches.

Fig. 158. A boot-shaped rubbing stone, of dark brown color. The specimen resembles one in the Latimer collection of the National Museum; but this example is much heavier and more finely polished.

Length, $15\frac{1}{2}$ inches.



FIG. 158.

Fig. 159. A carved and ornamented rubbing stone, of light brown color. Mr. im Thurn figures (*Timehri*, III, pl. 10, 11, 12) several forms. The specimen now under consideration is much more highly ornamented.

Height, $3\frac{9}{16}$ inches.



FIG. 159.

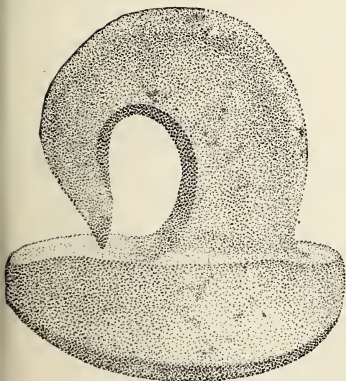


FIG. 160

Fig. 160. This object is entirely unique, and indeed outlandish to the Antilles. It is admirable in workmanship and has been preserved without a scratch. The material is mottled green and brown. It would not be difficult to guess, granting this to be genuine, that the process of stone carving went on after 1493, the year in which Columbus discovered Guadeloupe, and that some ingenious lapidary had undertaken to imitate a hook in the tackle. There is nothing improbable in this, for the Haida slate carvers, to-

day, imitate steamers and other inventions of the whites in making their curious pipes.

Height, $5\frac{5}{16}$ inches.

Fig. 161. A rough mortar in the form of a California soapstone olla. Very little art has sufficed to bring this specimen to its present form. This is the only regular stone mortar as yet reported from the Antilles.

Height, $2\frac{5}{16}$ inches; diameter, 5 inches.



FIG. 161.

Fig. 162. A bowl-shaped mortar of rich brown color. This form also seems out of place in the West Indies. The almost perpendicular sides and regularly beveled edge carry the mind to the Queen Charlotte archipelago, where beautiful, small dish-like mortars were used for triturating the native tobacco.

Height, $2\frac{8}{10}$ inches ; diameter, $6\frac{3}{10}$ inches.

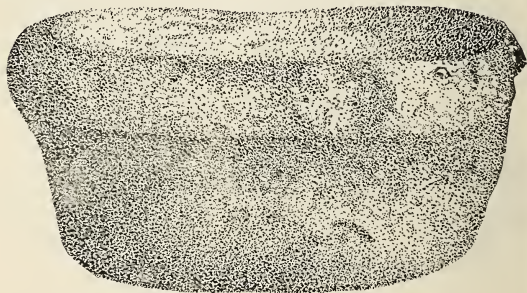


FIG. 162.

Fig. 163. A cylindrical stone dish, of dark brown patina, and very carefully made. Stone dishes quite as delicate come from Sitka, in which the ancient snuff-taker triturated his tobacco.

Width, $4\frac{9}{10}$ inches ; depth, $2\frac{1}{2}$ inches.

Fig. 164. A cylindrical mortar and pestle of brown color. The mortar is cylindrical in form and a cup-shaped depression occupies the center. The pestle is of the dumb-bell pattern, very symmetrical in

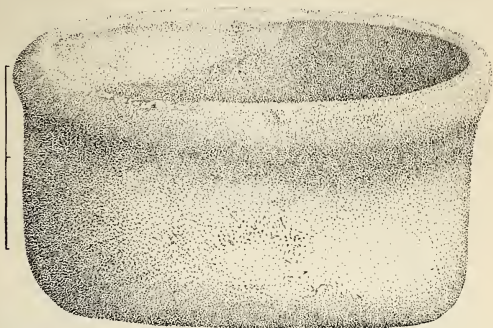


FIG. 163.

form. This apparatus would serve much better as a snuff muller than for hard pounding.

Height of mortar, 4 inches; length of pestle, $4\frac{7}{16}$ inches.

Fig. 165. A stone hammer, of seal-brown patina. This style of implement is generally called a pestle. But no one has ever seen a savage wasting his time polishing a hard stone, and putting a shoulder around the bottom for the purpose of knocking it off the first time he used it. On the other hand, any one who will visit Vancouver Island may see such stones in use, to-day, for driving wedges into cedar logs to split them. It is reasonable, therefore, to call this specimen a hammer.

Length, $7\frac{4}{16}$ inches.

Fig. 166. A large grinding implement, of blackish surface, resembling a cook's rolling-pin. The central portion is convex on the upper side, and flat beneath. The club-shaped ends were evidently to be grasped in the hands. This is the rarest of forms.

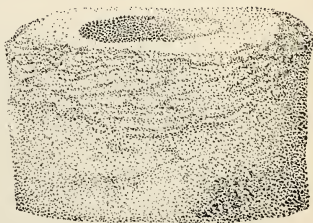


FIG. 164.



FIG. 165.

From St. Anne.
Length, 14 inches.

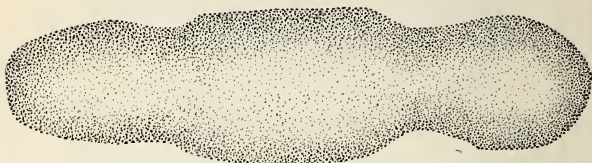


FIG. 166.

Fig. 167. A shallow, irregular mortar, of very dark brown color. Among North American relics this would be called a paint mortar. Fortunately the practices of our Pueblo Indians show us to what an enormous extent paint was used by the American aborigines. In Zuñi, for instance, the paint mortar never ceases. They are called into daily use by the potters, the warriors, and by the whole tribe, in the elaborate preparations for dances and ceremonies.

Height, $2\frac{1}{2}$ inches ; diameter, $6\frac{4}{10}$ inches.



FIG. 167.

Fig. 168. A paint mortar, of brown color. It is provided with a handle partly broken. It is not an unusual thing among modern Indians to use paint mortars with handles.

Width, $3\frac{8}{10}$ inches.

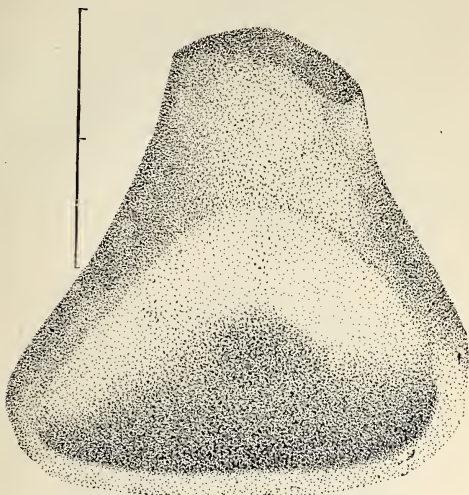


FIG. 168.

Fig. 169. A pretty dish of rich brown color. It is oval outline, and perfectly polished inside and out. The two ends are not quite symmetrical.

Diameter, $5\frac{1}{2}$ inches.

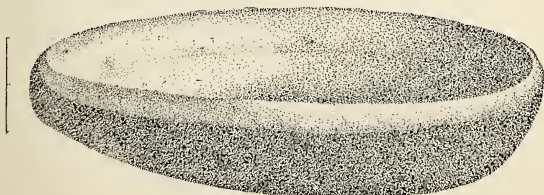


FIG. 169.

Fig. 170. A double concave disk of dark brown color, very smooth and beautifully rounded. Archæologists sometimes call such beautiful objects paint-mortars and sometimes chungke stones. The Navajos,

says Dr. Washington Matthews, at the present day play with the intensest excitement a game called "turkey claw." Two players contend in the following manner: Each one is provided with a pole, twice a man's span in length, consisting of two parts lashed together by a long leather thong, either end of which hangs loose for about a yard. At distances of nearly a foot on these loose ends are sewed crosswise similar leather thongs so that there seems to be two tassels of five strands each. At a given signal a ring, made by wrapping rawhide strings around a hoop, until it becomes very thick and heavy, is rolled along the ground. The players aim to throw their spears so that the ring in falling will gather up and become entangled with several of the leather strands. The number and position of strands lying on the ring enables the players to decide the game. There is no reason why such a disk should not be thus used. The statement made by writers that the pole should pierce the ring is not strictly true.

Diameter, $5\frac{9}{10}$ inches.

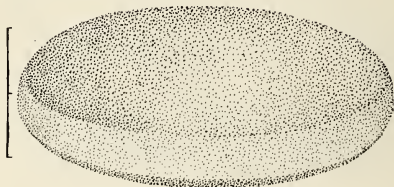


FIG. 170.

Fig. 171. A very highly polished implement of dark brown color, and presenting one of those enigmatic forms that are ever springing upon us in the West Indian area. The general outline is that of a ladle. Upon the reverse the face is flat, but the broad portion of the obverse is slightly concave and bordered by a molding which is carried nearly to the narrow portion. The latter is lingulate in form and has ten concentric ridges terminating in the border which is fluted externally. There is no duplicate of this form.

Length, $12\frac{1}{4}$ inches.

Fig. 172. An unique specimen of light-brown color and quite rough. It is hollow like a mortar, but the most remarkable feature about it is the series of flutings on the surface. M. Guesde is of the opinion that it was rather a cover for something than a grinding stone. In deference to this opinion it is drawn with the broad part downward.

Height, $6\frac{1}{2}$ inches.

Fig. 173. A smooth mortar of very dark color. The figure of a flying creature is well executed and beautifully polished. The cavity is also made with great care. It would not be wild speculation to imag-

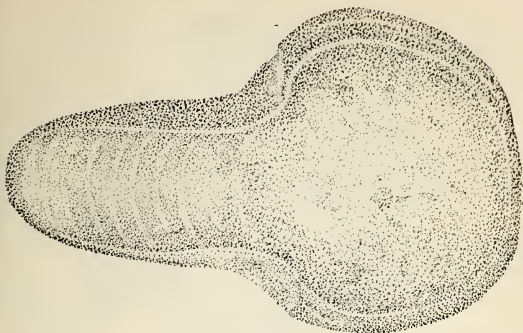


FIG. 171.

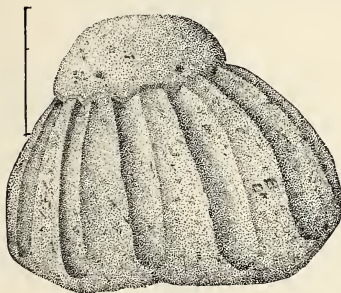


FIG. 172.

ine this the cosmetic mortar of some proud cacique long before the days of Guanecagaro. (From Porto Rico.)

Length, $8\frac{4}{10}$ inches; width 9 inches.

VIII. PERFORATED STONES.

The perforation of stone by the American aborigines has been faithfully studied by Dr. Charles Rau and others. When the boring is for a short distance two conical excavations are made from opposite sides, making a cavity shaped like an hour-glass. The process of boring a similar hole is commonly called countersinking. The West Indians as well as other aborigines of our continent also understood how to produce long excavations through very hard material, but never with the uniformity of a steel drill. One of the best tests of genuine relics of this class is the method of perforation.

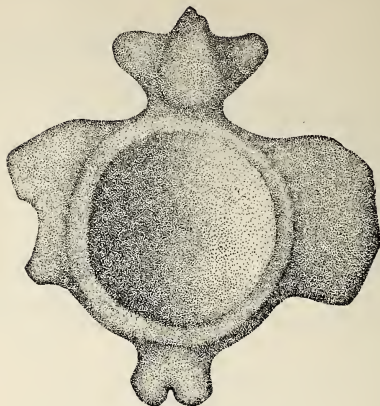


FIG. 173.

Figs. 174-178. Ordinary pebbles with a double countersink perforation near the border, generally so located that the long axis will be vertical. These are beautifully polished, and there is little doubt that they were worn as pendants.

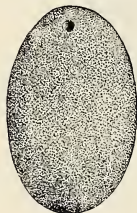


FIG. 174.



FIG. 175.

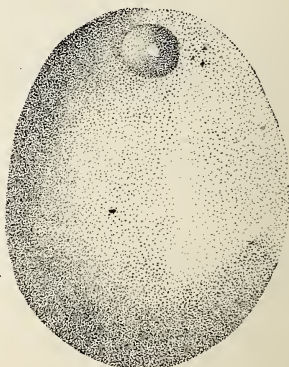


FIG. 176.

Long diameter of 174, $1\frac{6}{10}$ inches.

Long diameter of 175, $1\frac{1}{6}$ inches.

Long diameter of 176, $3\frac{1}{2}$ inches.



FIG. 177.

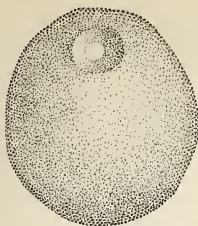


FIG. 179.

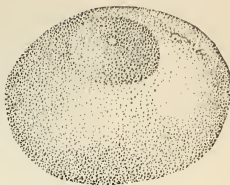


FIG. 180.



FIG. 178.

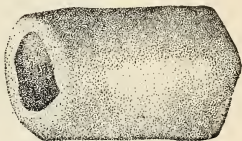


FIG. 181.

Long diameter of 177, $2\frac{8}{10}$ inches.

Long diameter of 178, $1\frac{7}{10}$ inches.

Long diameter of 179, $1\frac{7}{10}$ inches.

Long diameter of 180, $1\frac{4}{10}$ inches.

181. A perforated cylinder, of drab color, beautifully polished. This is a larger bore than is usual in West Indian specimens. The ancient lapidaries of this area excelled in the fineness of their perforations.

Length, $1\frac{4}{10}$ inches.

182. A stone ring, ovoid in outline, pierced by a double countersink in the middle. Stones of the same treatment are found in Porto Rico too heavy for a man to lift, which are undoubtedly unfinished collars. Length, 3 inches.

Fig. 183. A stone ring of great asymmetry. This perforation was probably made by pecking, its faces being rubbed down afterwards.

Dimensions, $5\frac{2}{10} \times 4\frac{7}{10}$ inches.

Fig. 184. A stone ring of still greater finish. Were it not for the material one might suppose

M. Guesde had collected the specimen on the Santa Barbara Islands, in California. These rings have caused considerable guessing among archaeologists, who call them whorls, digging stick weights, casse-têtes, etc.

Diameter, $4\frac{8}{10}$ inches.



FIG. 182.

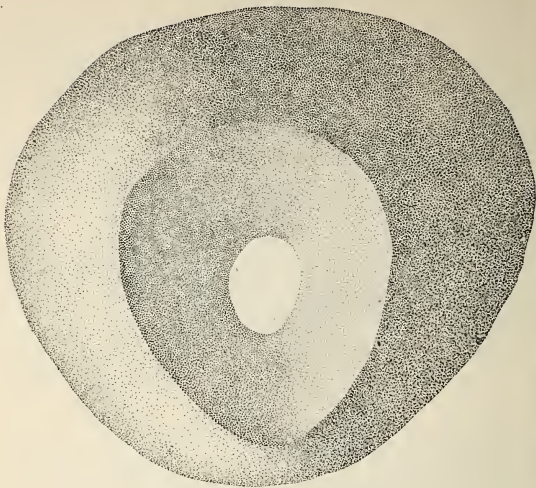


FIG. 183.

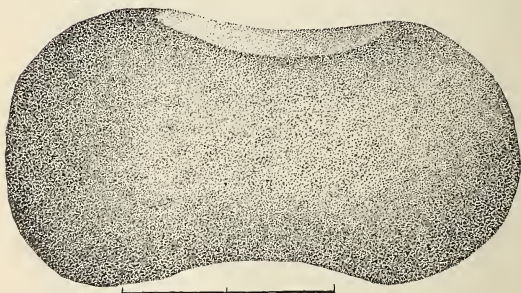


FIG. 184.

Fig. 185, 1 and 2. A beautifully finished stone pulley. The points to be noticed are the nearly circular outline, the countersink perforation, the curved slope of the sides, and the groove in the circumference. This last feature is unknown to the author of these notes in any other stone implement. The edge view is enlarged to exhibit the groove.

Diameter, $1\frac{8}{10}$ inches.

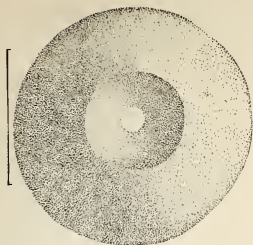


FIG. 185.—1.



FIG. 185.—2.

Fig. 186. A spool-shaped object, highly polished. The excavation does not pierce the stone. As the natives of this area distended their ears to a great extent, we may be allowed to call this an ear-plug.

Height, $1\frac{1}{2}$ inches.

IX. ORNAMENTAL FORMS.

In this group have been brought together those specimens in which ornament is of more importance than use. They are not all made of stone, and a few of them are not in M. Guesde's collection. The last named have come into the National Museum since the description of the Latimer collection in 1876. (Smithsonian Report, 1876, p. 372-393.) It is not to be supposed that the makers designed any such division of their artefacts.

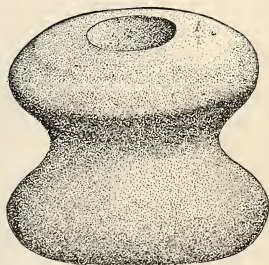


FIG. 186.

Fig. 187, 1 and 2. A beautifully polished object, and symmetrically formed in face and profile, the outlines of the edge view making a very pleasant combination.

Length, $3\frac{4}{10}$ inches.

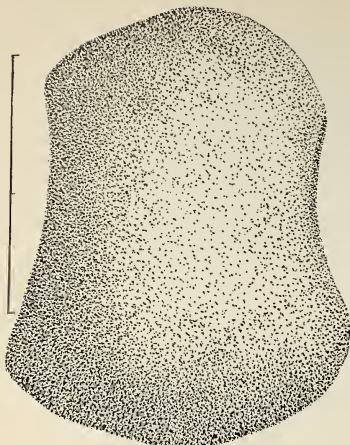


FIG. 187-1.

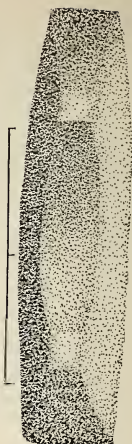


FIG. 187-2.

Fig. 188, 1 and 2. A similar object to that last described but not nearly so well formed.

Length, $3\frac{1}{10}$ inches.

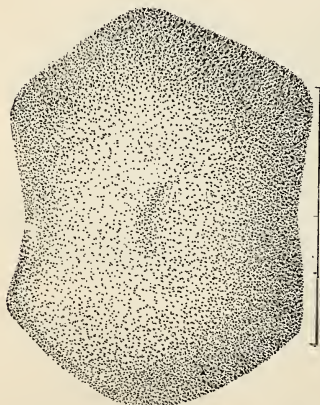


FIG. 188-1.

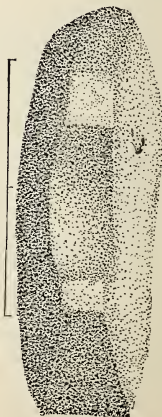


FIG. 188-2.

Fig. 189. A pick-shaped object, one projection broken. The surface is beautifully polished.

Length, 7 inches.



FIG. 189.

Fig. 190. A curved object of light brown color. If the lapidary designed to produce the outline of a banana he succeeded admirably.

Length, 6 inches; width, $1\frac{1}{2}$ inches.

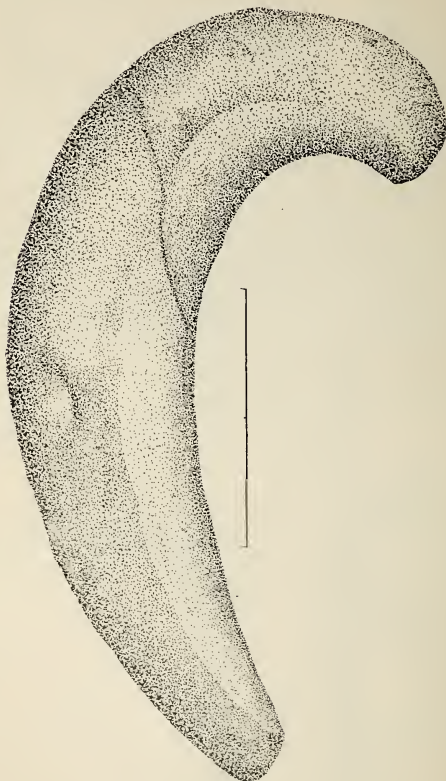


FIG. 190.

Fig. 191. A hook-shaped stone, very similar in finish to the last. From Canoe.

Length, 8 inches.



FIG. 191.

Fig. 192. A V shaped object of light brown color. It is possibly an amulet worn suspended from the neck. This should be compared with an ornament called by the Caribs, Caracoli, or Coulloucoli, and made of a metal resembling gold, obtained from the Alloïagues, of South America.

Width of limb, $4\frac{2}{10}$ inches.



- FIG. 192.

Fig. 193. The object sketched in this figure resembles some of the plainest specimens of mammiform stones from Porto Rico, in the Latimer collection. (Smithsonian Report, 1876.) No head or legs are indicated in the projections from the base. The lower face, not seen in the drawing, is concave and there is a hole in the apex. On either face of the mamma are distinct ridges. Mr. im Thurn figures one of these objects and calls attention to examples from San Domingo in Blackmore Museum. His own specimen is described as having animal heads at either end. This does not correspond with the one in the Latimer series, in each of which there is a head at one end and feet at the other. Their use as stools is very questionable, because that would bring the unsightly portion upward and bury the ornamental portion out of sight. The owner of the small island of Canouan, says Mr. Low, has a mammiform resembling Fig. 42, Latimer collection, with carved lines like those on Fig. 43. (See also *Timehri*, I, 268, 269.)

Length, $11\frac{1}{2}$ inches; height, 7 inches.

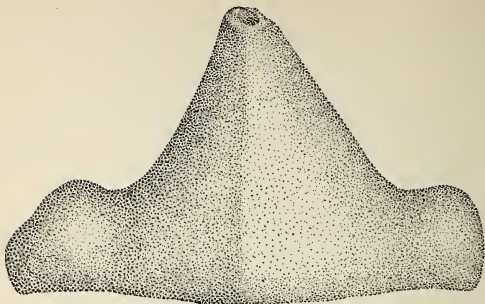


FIG. 193.

Fig. 194. This object is absolutely unique, for we have in it a miniature fire-place or altar, both faces of which are identical. Four rude steplets conduct to a landing place partly covered by a niche. At the top an excavation is seen which may have served for a statuette. The object was found at Abymes, but the evidence of aboriginal origin should be strong just in comparison to the outlandishness of a specimen. Height, 6 inches.

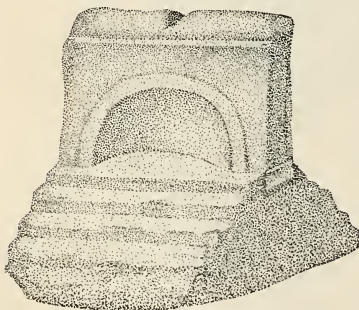


FIG. 194.

Fig. 195. An ornamental piece, of bluish green color. It is rare in form, but not absolutely unique. In the American Museum at New York is a similar specimen. The chamfering and fluting are gracefully blended. The left-hand extremity is perforated for suspension. From Punto Duo.

Length of long limb, 8 inches; of short limb, $5\frac{3}{10}$ inches.

Fig. 196. A highly ornamented specimen, one portion of which is plain, resembling the edge of a cleaver; the remainder is covered with ornament. Let us imagine this to be a stone ax, the most beautiful in the world. The following characteristics claim our attention: The hafting notches are extended, that on the upper part by a narrow gutter almost parallel with the edge; that on the lower part sweeping outward in a curve which combines

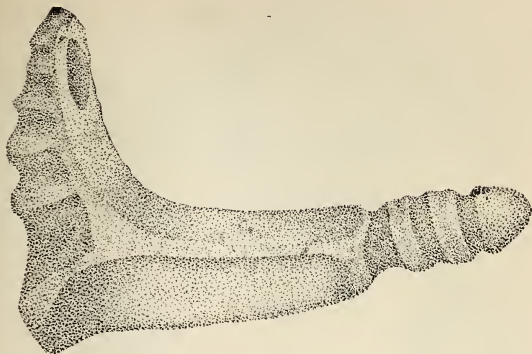


FIG. 195.

the lower portion and both faces in a continuous pattern. This is assuredly M. Guesde's jewel in the ax class.

Length, $5\frac{1}{2}$ inches.

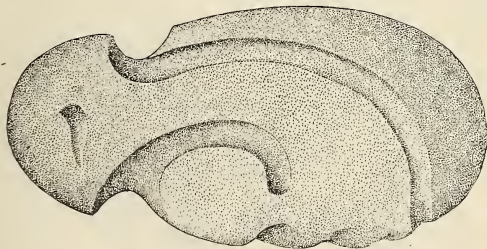


FIG. 196.

Fig. 197. An ornamental stone of a marble gray color. The right part is conoidal and has near its middle a raised band. This may have fitted a socket. The left part resembles a liberty cap, bounded at its base by the curve of beauty. On the two sides of the enlarged middle are compound scrolls in relief, resembling the implements sold to draughtsmen for making curves.

Length, $11\frac{1}{2}$ inches.

Fig. 198. A stone collar of very dark brown patina. This belongs to that class of enigmatical objects which formed such an attractive feature in the Latimer collection from Porto Rico. (Smithsonian Report, 1876, 372-393.) It is of the left-shouldered variety; that is, imagining the object suspended from the neck like a regalia, there is a projection on

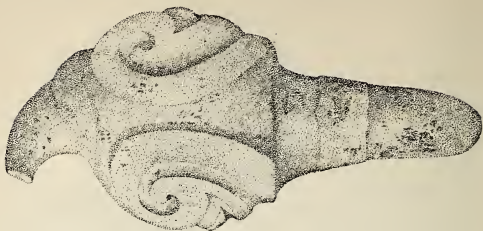


FIG. 197

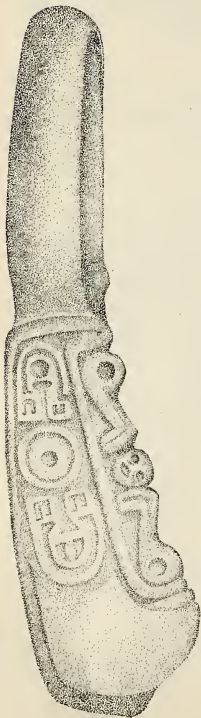


FIG. 198.

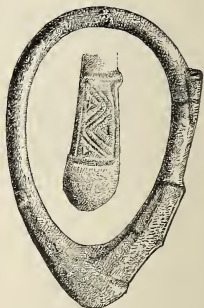


FIG. 199.

the left side faintly resembling a lashing of the two ends of a hoop. This being on the left, the ornamental panel is on the right. The elements of this panel are not unique. Notice first the beading looped on the right side at the top of the panel, and widening downward to inclose the key ornaments and to pass quite around the boss below. The border on the edge outside and in front of this bead has a human face between two opposing scrolls. The bas-relief ornament inside the bead consists of a double ring in relief, with two ornaments as nearly alike as the varying space would admit.

Length, $17\frac{2}{10}$ inches; thickness of side, $1\frac{6}{10}$ inches. (Compare table in Smithsonian Report, 1876, p. 390.)

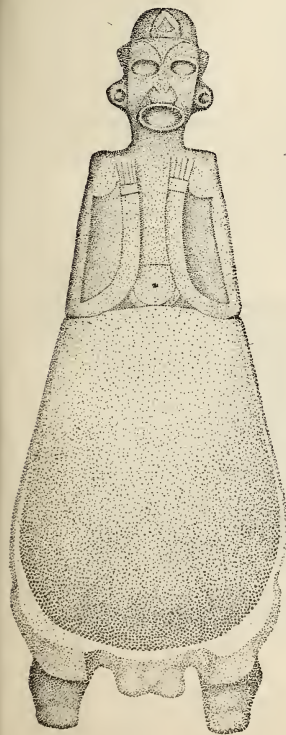


FIG. 200.

Fig. 199. A collar from San Domingo, probably obtained in Porto Rico. It does not belong to M. Guesde's collection, but the figure will explain some features omitted in the last. This is also left-shouldered. The shoulder projection, the looped bead, with its herring-bone ridges, inclosing triangular excavations, the boss, and the slight ornament on the shouldered side are all well expressed. Although both these are left-shouldered, there are many right-shouldered ones, plainly showing that they were to be used in pairs.

Fig. 200. A stone stool or chair of the variety mentioned and illustrated in the Smithsonian Report, 1876, p. 376. The material of those there described, however, is either sandstone or wood, and the device is some animal form. In M. Guesde's specimen the material is a dark brown volcanic stone, and the device is the human form. Moreover, the position is inverted. The man is lying on his back, with his feet drawn up to form the legs of the stool. His arms, without any attempt at accuracy of delineation are doubled on his neck. The eyes and mouth are like the same features in all aboriginal statuary, and beautiful shells were doubtless inserted in them. The ears have large openings in which were in-

serted plugs of wood, stone, shell, or feathers. The legs of the chair, just beneath the man's shoulders, are mere projections from the stone. The markings in the head and forehead are quite tastefully designed. The back does not slope upward as much as in the Latimer specimens. In Dr. Liborio Lerda's "Eldorado" is figured a mummified human body seated on a stone stool in a cist. The figure in this paper and notes of im Thurn (*Timehri*, I, 271) should be consulted. The impossibility of using such objects as mealing stones was pointed out by the author of these notes ten years ago, and im Thurn adds the very pertinent argument that the ancient West Indians did not grind maize, subsisting mainly on cassava. Dr. Joseph Jones quotes Sheldon as saying, "When a Carib died his body was placed in the grave in an attitude resembling that in which they crouched around the fire or the table when alive, with the elbows on the knees and the palms of the hands against the cheeks."

Length, 16 inches; width, $6\frac{1}{2}$ inches; height of head, $6\frac{1}{2}$ inches; of feet, 2 to 3 inches.

Figs. 201-202. A low wooden stool from Turk's Island, collected by the late W. M. Gabb. This form is similar to those described in a previous publication, and referred to by the historians of Columbus. The ornamentation of the countenance of the human head are best shown in Fig. 202 *a*. The labyrinthine design of the seat ornament, the scrolls, lozenges, and chevrons in the head ornaments are most praiseworthy. Length, 46 inches. (202 *a*, *b*, *c*, *d*.)



FIG. 202 *d*.

Fig. 203. A human figure carved from a single log of wood. The portions broken away render it impossible to tell how large the image was originally and what position the figure occupied. Especially notice-

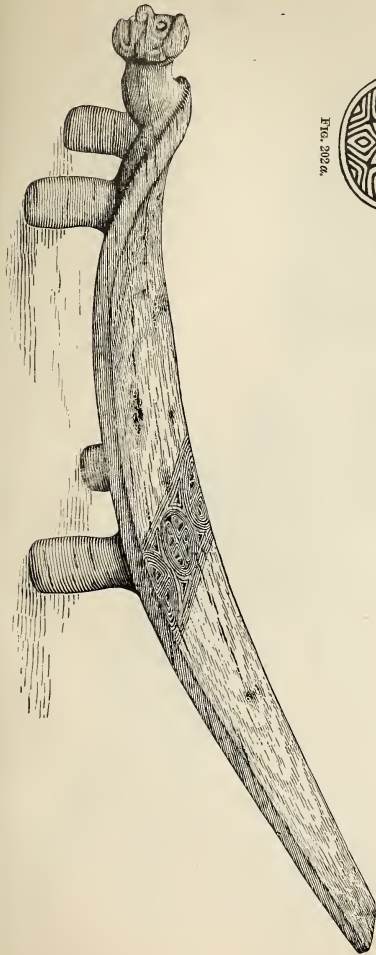


FIG. 201



FIG. 202a.



FIG. 202b.



FIG. 202c

able are the ear-plugs and the bands drawn tightly around the muscle of the arms. This feature is explained in the next figure. Length, 43 inches.



FIG. 203.

Figs. 204, 205. This carving represents two individuals seated on a canopied chair. The whole thing is interesting to the highest degree. The chair has a high back ornamented with scrolls and concentric rings. Both individuals have embroidered skull caps, the nearest approach to which are the basket work, close-fitting embroidered hats of the Indians of the Great Interior Basin of the United States. The ears much distended are to be looked for. The most noteworthy feature, however, is the bands of embroidered cotton just above the calves. In his second voyage, cruising among the Caribbee Islands, Columbus came on the 10th of November, 1493, to Santa Cruz Island. Here he had a fight with some natives in a dug-out and wounded some of them. "The hair of these savages was long and coarse, their eyes were encircled with



FIG. 204.

paint so as to give them a hideous expression ; and bands of cotton were bound firmly above and below the muscular part of the arms and legs so as to cause them to swell to a disproportioned size." (Irving's Columbus, I, 333.) Height, 31 inches.



FIG. 205.

Figs. 206, 207. Spoon and cup carved from the guava fruit. The spoon and mug are both of European form, but it would be exceedingly interesting to obtain some of the ancient forms. It is more than probable that the gourd and jicara fruit and cocoa played an important part in this portion of the economy of the ancient Caribs.

Fig. 208. In this figure is represented an inscribed slab found in a portion of Guadeloupe, properly so called. It weighs several tons and



FIG. 206.



FIG. 207.

it is impossible to remove it. In the vicinity are to be seen many other rocks bearing inscriptions, but this is the most elaborate of the group. The general appearance of the figures is not dissimilar to those on the cover of the journal published in Demerara, called *Timehri*, 208, a.

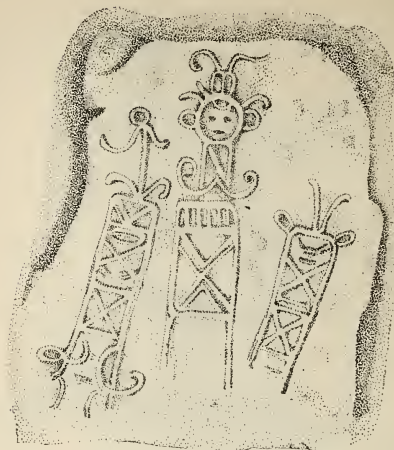


FIG. 208.



FIG. 208 a.

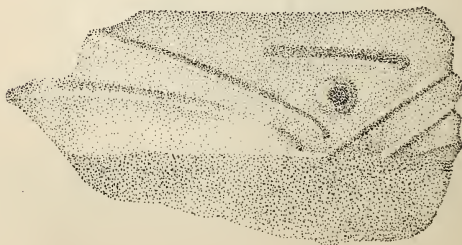


FIG. 209.

Figs. 209-213. Specimens of pottery in M. Guesde's collection. They do not differ at all from those found throughout the West Indies. The material is poorly worked but well baked and most of the designs on the handles are boldly conceived. (See also *Timehri*, III, pl. 14-17.)



FIG. 210 a.



FIG. 210 b.



FIG. 210 c.

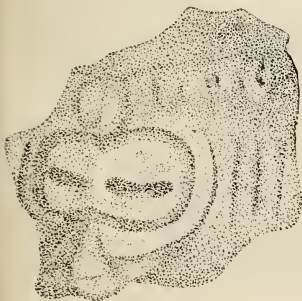


FIG. 211.



FIG. 212.

Fig. 214. This is the best preserved fragment of pottery as yet figured from this area. The cylindrical mouth and the ornamental body point to a vessel of some pretensions. It is impossible to conjecture what was the continuation of the lower portion.



FIG. 213.

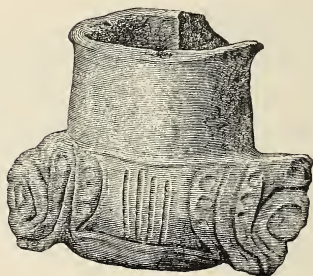


FIG. 214.

Figures 215, 215 *a*. In the introduction to this paper M. Guesde speaks of shell celts; they are also mentioned over and over again in Stevens' "Flint Chips," and those familiar with the arts of Polynesia will recall the beautiful adze blades scarcely distinguishable from chalcidony, keeping clearly in mind the fact that the people of each area utilize always the best materials and processes consistent with their

grade of civilization. The whole subject of art in shell is exhaustively treated by W. H. Holmes in Second Annual Report of the Bureau of Ethnology, pp. 203-205. (See also *Timehri*, III, pl. 13.)

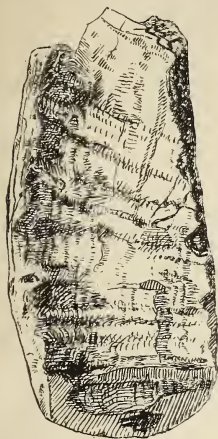


FIG. 215.

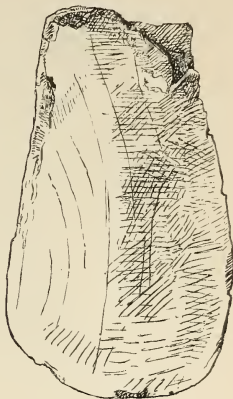


FIG. 215 α.

